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PARTMENT OF STATE LANDS

ABANDONED MINES AND RECLAMATION BUREAU

ABANDONED INACTIVE MINE SCORING SYSTEM

AIMSS

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SAMPLE DESIGNATION LEGEND

- GW:** Groundwater sample from well, spring, shaft or adit discharge.
- SW:** Surface water sample from stream, river, ditch, or adit discharge.
- SE:** Stream sediment sample.
- TP:** Mill tailings sample from tailings pond or pile, or stream-side tailings deposit.
- WR:** Waste rock sample from waste rock dump.
- SS:** Background soil sample.

**MONTANA DEPARTMENT OF STATE LANDS
ABANDONED MINES AND RECLAMATION BUREAU**

**ABANDONED HARDROCK MINE PRIORITY SITES
ABANDONED AND INACTIVE MINES SCORING SYSTEM
(AIMSS)**

PREPARED FOR:

**ABANDONED MINES AND RECLAMATION BUREAU
MONTANA DEPARTMENT OF STATE LANDS
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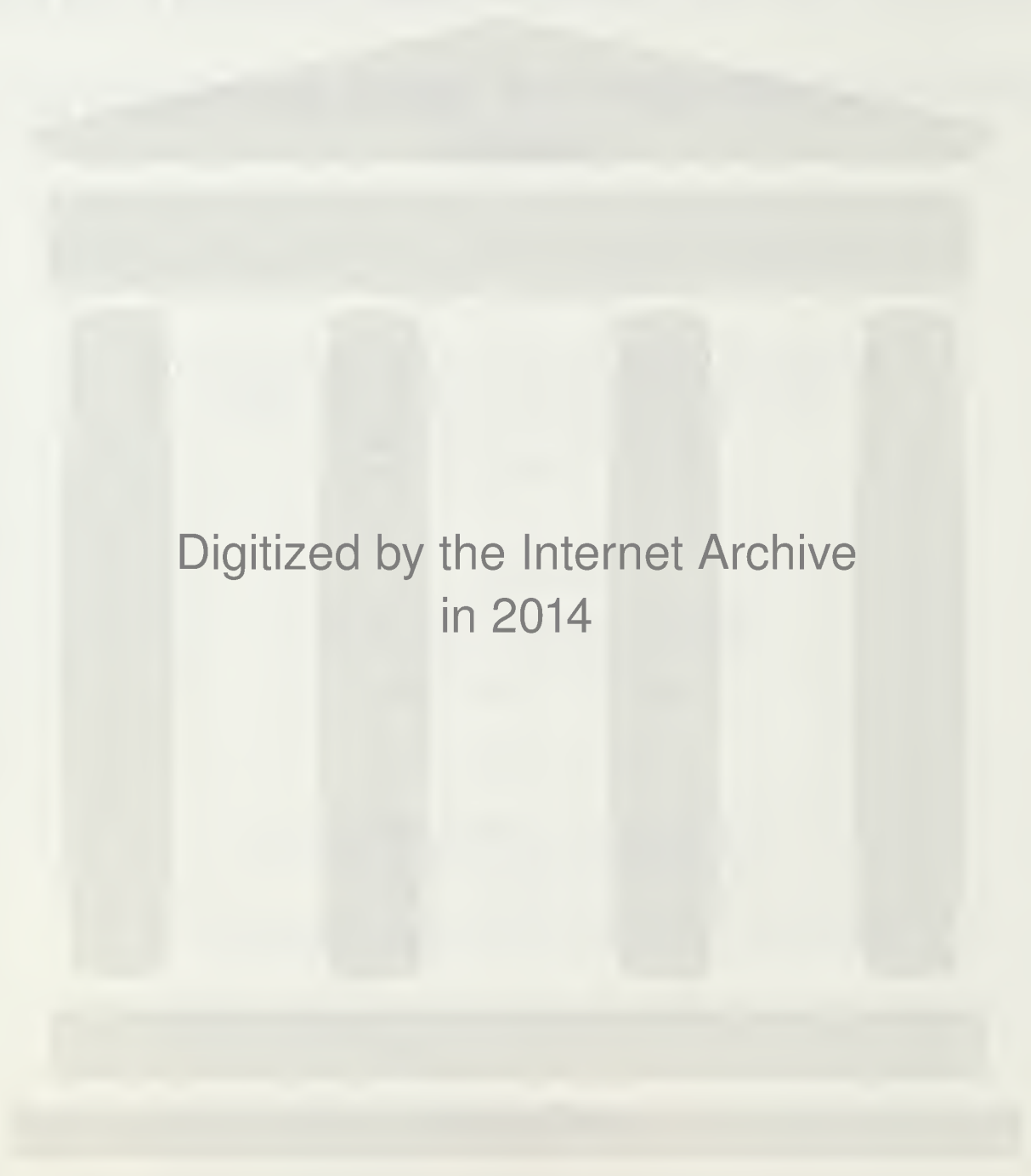
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APPENDIX B - WASTE CHARACTERISTICS WORKSHEET

1.0 INTRODUCTION

This document describes the Abandoned and Inactive Mines Scoring System (AIMSS) used by the MDSL/AMRB to prioritize abandoned and inactive mining sites and to allocate resources. The scoring system is modelled after the USEPA's Hazard Ranking System (Federal Register, 1990); however, it has been modified to specifically address mining sites in Montana. Many of the evaluation factors and scores are similar to and were derived from the HRS; the scoring algorithm is identical to that used in the HRS. The philosophy and basis for many of the assumptions and evaluations are described in great detail in the documentation for the HRS and are not reiterated here. Any substantive changes to the HRS scoring to accommodate the AIMSS are identified and discussed. The primary source of information used to score mine sites were the site visits performed during 1993, and the laboratory data and inventory forms generated by those investigations.

Standard criteria were developed by MDSL/AMRB, based primarily on criteria in EPA's HRS, for determining priorities among releases or threatened releases of hazardous substances from abandoned and inactive mines throughout the State of Montana, for the purpose of taking remedial action and determining the urgency for such action. These criteria and priorities are based on the relative risk to public health or the environment, taking into account the population at risk, the hazard potential of the substances, the potential for contamination of drinking water supplies, the potential for direct human contact, and the potential for detrimental effects to sensitive ecosystems.

Site-specific criteria for evaluation include:

- The extent of actual releases, and the potential to release hazardous constituents from the site into the environment;
- The quantity, toxicity, and concentrations of hazardous constituents in waste materials at the site; and,
- The degree of risk to human health and the environment posed by those hazardous constituents.

The AIMSS is not, and is not intended to be, equivalent to a detailed qualitative or quantitative risk assessment, as might be performed as part of remedial actions. This scoring is used to rank differing and disparate sites, as accurately as is feasible with existing or easily obtainable information, using a common basis - relative risks to human health or the environment. The data requirements for the AIMSS do not include long-term monitoring or an accurate determination of the full nature and extent of contamination at a site, nor the projected levels of exposure. The AIMSS attempts to estimate risks posed by each site being evaluated relative to the other mine sites evaluated. Since the scoring is intended only as a preliminary screening/prioritization mechanism, the effects of potential inaccuracies have been minimized by intervalizing

those data with the greatest degree of uncertainty (e.g. population and waste quantities). It also maximizes the use of existing site data: the measured concentrations of constituents present in waste materials with respect to background concentrations; and, actual releases of hazardous constituents to the environment.

The scoring system's structure (algorithm) is identical to that used by the EPA HRS. Four pathways or routes of exposure are evaluated:

- The groundwater pathway,
- The surface water pathway,
- The air pathway, and
- The direct contact pathway (soil exposure pathway in the HRS).

The four separate pathway scores are summed directly (not the sum of squares used in the HRS) and divided by a constant. Using the sum of squares method for combining the four pathway scores effectively equalizes each of the pathways in terms of relative risk. This would have an undesirable effect on the scoring, given the greater relative importance of the water pathways, and the relatively limited data for the air pathway.

Within each of the four pathways, three primary factors are evaluated:

- The likelihood of release, including observed releases of site hazardous constituents to the pathway and the potential to release to the pathway;
- Waste characteristics, including the concentrations of hazardous constituents corrected for background, the quantity of wastes (volumes, areas), and the relative toxicity of each constituent to humans and ecosystems; and,
- The potential receptors (targets) of exposure to hazardous constituents at the site, both human and environmental.

The three primary factors are multiplied together (as in the EPA HRS) to derive each of the four pathway scores. This equalizes the relative effect of each primary factor in terms of changing the overall pathway score. Hence, a greater likelihood of release, higher constituent concentrations, or more potential receptors all affect the pathway score similarly, as is necessary and proper for an evaluation of relative risk.

The following is a discussion of each of the pathways, factors, and other site-specific criteria as they relate to the AIMSS. Several factors are redundant between pathways; these factors will be fully discussed the first time they are identified, and referenced when used subsequently. Again, wherever possible, factors and scores are similar to those used in the EPA HRS. A primary source of data is the AMRB Hazardous Materials Inventory Form filled out for each site.

2.0 GROUNDWATER PATHWAY

The groundwater pathway is evaluated using three factors: the likelihood of release to groundwater, groundwater waste characteristics, and groundwater targets. The product of these three factors is the groundwater pathway score.

2.1 GROUNDWATER LIKELIHOOD OF RELEASE

The likelihood of release factor evaluates three subfactors for scoring: observed releases to groundwater, exceedances of drinking water standards, and potential to release.

2.1.1 Observed Release

An observed release to groundwater is defined as a downgradient groundwater concentration at more than three times the upgradient groundwater concentration, for any constituent that can be attributed to the site (same as EPA HRS). Groundwater concentrations used for this evaluation can be measured in monitoring wells, domestic wells, or seeps/springs, and concentrations do not have to exceed any standards to score an observed release. A constituent is considered attributable to the site if that constituent exists in any waste material at the site at a concentration that is more than three times the background concentration of the constituent. Discharging adits are not considered observed releases; they are considered sources and are evaluated later in the waste characteristics section. An observed release to groundwater, that can be documented using the above criteria, is assigned a score of 300, otherwise this score is 0.

2.1.2 Exceedances

A downgradient groundwater concentration in a domestic well or monitoring well that exceeds USEPA MCL's or MCLG's for any constituent that can be attributed to the site, is assigned a score of 100, whether or not an observed release to groundwater is documented. Current USEPA MCL's and MCLG's used for this evaluation are listed below:

Arsenic	50 ug/L	Barium	2,000 ug/L	Cadmium	5 ug/L
Copper	1300 ug/L	Chromium	100 ug/L	Mercury	2 ug/L
Nickel	100 ug/L	Antimony	6 ug/L	Lead	15 ug/L
Cyanide	200 ug/L				

2.1.3 Potential to Release

The potential to release constituents to groundwater is evaluated using two criteria: the containment of the wastes at the site; and, the estimated depth to groundwater.

2.1.3.1 Containment

Containment is evaluated with respect to engineered structures designed to prevent releases to groundwater, such as liners, covers, and runoff diversions. These engineered structures must be intact, functioning, and regularly monitored/maintained. Using the least contained waste material at the site, assign a value as follows: no containment = 20; presence of either a liner, runoff diversions, or a vegetated topsoil cover = 10; presence of two of the above three structures = 5; and, completely contained (all of the above) = 1.

2.1.3.2 Depth to groundwater

The depth to groundwater is estimated using the existing well logs from the area, observation of springs, seeps or flowing adits at the site, and the relative topography of the site (stream valley or hilltop). Using this estimated depth (or actual depth, if available), assign a value as follows: shallow (less than 25 feet to water) = 20; moderate (25 to 100 feet) = 10; or, deep (greater than 100 feet) = 2.

2.1.3.3 Potential to release score

Calculate the potential to release score by multiplying the containment value by the depth value (Maximum score is 400).

2.1.4 Groundwater Likelihood of Release Score

The groundwater likelihood of release score is the sum of the observed release, exceedances, and potential to release scores (Maximum = 800). Using the sum of the three subfactor scores differs from the EPA HRS in that the HRS uses the higher of the observed release or the potential to release scores, while exceedances are evaluated under the targets score. The scoring strategy used here accounts for both the observed release to the pathway and the potential to continue releasing constituents to the pathway. Exceedances are included to account for the magnitude (concentration) of constituents actually found in the pathway.

2.2 GROUNDWATER WASTE CHARACTERISTICS

Waste characteristics for the groundwater pathway are evaluated using the volume of waste materials (sources) at the site, the concentrations of constituents in samples of the waste material, the background concentrations, and the EPA HRS human toxicity value (SCDM, 1993).

2.2.1 Quantity

A quantity value is assigned according to measured volumes of waste materials in cubic yards (cy) for each solid matrix source(s) or portions of a source, for which

analytical data exist. Each sample collected at a site is assigned a volume that the sample represents (sample volume assignments are tabulated on the waste characteristics worksheet). This sample volume was derived based on the source volume(s) that the composite sample analyses represents (see SOP regarding XRF analyses and sample compositing; see also the AMRB Sampling and Analysis Plan, Pioneer, 1993).

Also, a value is assigned for each measured and sampled adit discharge in gallons per day (gpd = cubic feet per second X 646,272 gpd/cfs). The conversion of cfs to gpd is used to equate adit discharges (highly mobile constituents) with other solid matrix sources (less mobile) at the site.

This approach differs significantly from the HRS waste characteristics score calculation. First, adit discharges are not considered sources in the HRS. Second, the HRS only considers the most toxic constituent found at the site, does not consider the concentration, and applies the most toxic constituent to the entire volume of wastes at the site. The AIMSS scoring method more fairly evaluates relative risks between sites, accounting for site specific constituent concentrations, the varying toxicity of different constituents, and includes adit discharges in the source evaluation. This method more accurately discriminates between sites with higher concentrations or more toxic constituents in relation to sites with lower concentrations or less toxic constituents. However, it is also more difficult to calculate.

Each media (solid or water) and sampled source at the site will be scored separately. Assign the sample quantity value and the toxicity value as follows:

<u>Range (cy or gpd)</u>	<u>Quantity Value</u>	<u>Constituent</u>	<u>Human Toxicity Value</u>
less than 10	0.003	Antimony	10.
10-30	0.01	Arsenic	10.
30-100	0.03	Barium	0.01
100-300	0.1	Cadmium	10.
300-1,000	0.3	Chromium	10.
1,000-3,000	1.	Copper	0.
3,000-10,000	3.	Iron	0.
10,000-30,000	10.	Lead	10.
30,000-100,000	30.	Mercury	10.
100,000-300,000	100.	Nickel	10.
300,000-1,000,000	300.	Zinc	0.01
more than 1,000,000	1,000.	Thorium	10.
		Uranium	10.
		Cyanide	0.1
		Asbestos	10.

2.2.2 Hazard

Calculated for each constituent (note: asbestos is not included in the groundwater waste characteristics evaluation since it is immobile in groundwater) as the product of the sample concentration (solids in mg/Kg or water in ug/L) and toxicity values (derived from the EPA HRS human toxicity values divided by 1,000; SCDM, 1993). Solid sample concentrations are corrected by subtracting background concentrations, and using the difference in the calculation; adit discharge concentrations are used directly because background concentrations are not applicable.

Manganese was excluded from the calculation of all hazard values. Mn is generally present at every mining site at concentrations between 2 and 3 orders of magnitude higher than other constituents, even after correcting for background. Mn is assigned a toxicity value of 10, according to HRS, due to high toxicity in metallic form; Mn-oxides, the form that Mn occurs in at mining sites, are much less toxic. When calculating hazard values, these two criteria combine to give manganese concentrations an unintended influence over the total hazard score. This is in spite of the fact that there are no MCL's or AWQC for manganese. For these reasons, and in the interest of accurately evaluating relative risks at mining sites, manganese is excluded from the waste characteristics calculations, for both solid and aqueous sources.

A separate product is calculated for each element and the element-products are summed for each sample.

For sample #1:

Constituent 1: (Sample conc. - background conc.) x Human toxicity value = _____

Constituent 2: (Sample conc. - background conc.) x Human toxicity value = _____

.

.

Constituent n: (Sample conc. - background conc.) x Human toxicity value = _____

The sum of the element-products is the hazard value for sample #1 = _____

The hazard value procedure is repeated for each sample collected at the site.

For sample #n:

Constituent 1: (Sample conc. - background conc.) x Human toxicity value = _____

Constituent n: (Sample conc. - background conc.) x Human toxicity value = _____

Sum of element-products (hazard value) for sample #n = _____

2.2.3 Groundwater Waste Characteristics Score

The waste characteristics score is calculated by multiplying the sample quantity value (Appendix B) and the hazard value (calculated above) for each sample, summing the values for all samples, and then dividing by 10,000:

Sample #1: Sample quantity value x sample #1 hazard value = _____

Sample #n: Sample quantity value x sample #n hazard value = _____

The groundwater waste characteristics score is the sum of the sample products divided by 10,000.

2.3 GROUNDWATER TARGETS

The groundwater targets score is evaluated by assessing those potential users of groundwater, giving a greater weight to those potential groundwater users that are closer to the site. This method differs slightly from the HRS in that the detailed wells/distance/dilution factoring is simplified reflecting the limited well information available.

2.3.1 Number of Wells Within 1 Mile

This value is derived using the number of wells within 1 mile of the site, as reported in the MBMG well inventory database, multiplied by 2.5 persons per well. The assumption of 2.5 persons per well is based on the average persons per residence reported for Montana.

2.3.2 Number of Wells Between 1 and 4 Miles

This value is derived using the number of wells within 4 miles of the site, as reported in the MBMG well inventory database, and subtracting the number of wells within 1 mile (above). These targets are also multiplied by 2.5 persons per well, and then divided by a distance/dilution factor of 2.5, to reflect the lessened risk due to greater distance from the sources and dilution.

2.3.3 Distance to Nearest Well

This value is an adjustment used to emphasize the greater risk to wells close to the site (per HRS). Only the nearest well is used (residential or recreational use), regardless of the number or frequency of persons using that well. Assign a value as follows: less than 1000 feet = 10; between 1000 feet and 1/2 mile = 5; and, more than 1/2 mile or unknown = 0.

2.3.4 Groundwater Targets Score

The groundwater targets score is the sum of the above three values: wells within 1 mile, wells between 1 and 4 miles, and the nearest well value.

2.4 GROUNDWATER PATHWAY SCORE

The Groundwater Pathway Score is the product of the Groundwater Likelihood of Release Score (section 2.1), the Groundwater Waste Characteristics Score (section 2.2), and the Groundwater Targets Score (section 2.3).

3.0 SURFACE WATER PATHWAY

The surface water pathway is evaluated using three factors: the likelihood of release to surface water, surface water waste characteristics, and surface water targets. The product of these three factors is the surface water pathway score.

3.1 SURFACE WATER LIKELIHOOD OF RELEASE

The likelihood of release factor evaluates three subfactors for scoring: observed releases to surface water, exceedances of drinking water or ambient water quality standards, and potential to release.

3.1.1 Observed Release

An observed release to surface water is defined as a downstream surface water or stream sediment concentration at more than three times the upstream surface water or sediment concentration, for any constituent that can be attributed to the site (same as EPA HRS). Surface water or sediment concentrations used for this evaluation can be measured in perennial or intermittent surface water drainages, and concentrations do not have to exceed any standards to score an observed release. A constituent is considered attributable to the site if that constituent exists in any waste material at the site at a concentration more than three times the background concentration of the constituent. Discharging adits are not considered observed releases; they are considered sources and are evaluated later in the waste characteristics section. An observed release to surface water, that can be documented using the above criteria, is assigned a score of 300, otherwise this score is 0.

3.1.2 Exceedances

A downstream surface water concentration that exceeds USEPA MCL's or MCLG's for a constituent that can be attributed to the site, is assigned a score of 100, whether or not an observed release to surface water can be documented. A downstream surface water concentration exceeding USEPA or State acute Ambient Water Quality Criteria (AWQC), but not MCL's, for a constituent that can be attributed to the site, is assigned a score of 50 (do not add 50 if MCL's are also exceeded).

Current USEPA MCL's and MCLG's used for this evaluation are listed below:

Arsenic	50 ug/L	Barium	2,000 ug/L	Cadmium	5 ug/L
Copper	1300 ug/L	Chromium	100 ug/L	Mercury	2 ug/L
Nickel	100 ug/L	Antimony	6 ug/L	Lead	15 ug/L
Cyanide	200 ug/L				

Current State of Montana acute AWQC used for this evaluation are listed below (note that most criteria are a complex exponential function of hardness):

Arsenic	360 ug/L
Cadmium	$\exp((1.128 \times \ln(\text{hardness})) - 3.828)$
Copper	$\exp((0.9422 \times \ln(\text{hardness})) - 1.464)$
Chromium	$\exp((0.819 \times \ln(\text{hardness})) + 3.688)$
Mercury	2.4 ug/L
Nickel	$\exp((0.846 \times \ln(\text{hardness})) + 3.3612)$
Lead	$\exp((1.273 \times \ln(\text{hardness})) - 1.46)$
Zinc	$\exp((0.8473 \times \ln(\text{hardness})) + 0.8604)$

3.1.3 Potential to Release

The potential to release constituents to surface water is evaluated using two criteria: the containment of the wastes at the site; and, the distance from waste materials to surface water.

3.1.3.1 Containment

Containment is evaluated with respect to engineered structures designed to mitigate releases to surface water (via flooding and storm runoff) including dams, diversions, sediment basins, or other intact, functioning engineered system. Using the least contained waste material at the site, assign a value as follows: no functioning containment structures = 20; presence of one of the containment structures listed above = 10; wastes completely contained with respect to surface water = 1.

3.1.3.2 Distance to surface water

The shortest distance from any waste material to the nearest surface water drainage (including intermittent drainages) was recorded on the AMRB inventory form during the site visit. Use this distance to assign a value as follows: less than 25 feet = 20; between 25 and 100 feet = 10; and, greater than 100 feet = 2.

3.1.3.3 Potential to release score

Calculate the potential to release score by multiplying the containment value by the distance value (Maximum score = 400).

3.1.4 Surface Water Likelihood of Release Score

The surface water likelihood of release score is the sum of the observed release, exceedances, and potential to release scores (Maximum = 800). Using the sum of the three subfactor scores differs from the EPA HRS in that the HRS uses the higher of the observed release or the potential to release scores, while exceedances are evaluated under the targets score. The scoring strategy used here accounts for both the observed release to the pathway and the potential to continue releasing constituents to the pathway. Exceedances are included to account for the magnitude (concentration) of constituents actually found in the pathway.

3.2 SURFACE WATER WASTE CHARACTERISTICS

Waste characteristics for the surface water pathway are evaluated using the volume of waste materials at the site, the concentrations of constituents in samples of the waste material, the background concentrations, and the EPA HRS human toxicity and ecotoxicity values (SCDM, 1993).

3.2.1 Quantity

A quantity value is assigned in the same manner as the groundwater pathway (section 2.2.1). A value is also assigned for adit discharges as in the groundwater pathway.

Each media (solid or water) and sampled source at the site will be scored separately. Assign the sample quantity value, the toxicity value, and the ecotoxicity value as follows:

<u>Range (cy or gpd)</u>	<u>Quantity Value</u>	<u>Constituent</u>	<u>Human Toxicity Value</u>	<u>Ecotoxicity Value</u>
less than 10	0.003	Antimony	10.	0.
10-30	0.01	Arsenic	10.	0.01
30-100	0.03	Barium	0.01	0.001
100-300	0.1	Cadmium	10.	1.
300-1,000	0.3	Chromium	10.	0.1
1,000-3,000	1.	Copper	0.	0.1
3,000-10,000	3.	Iron	0.	0.01
10,000-30,000	10.	Lead	10.	1.
30,000-100,000	30.	Mercury	10.	10.
100,000-300,000	100.	Nickel	10.	0.01
300,000-1,000,000	300.	Zinc	0.01	0.01
more than 1,000,000	1,000.	Thorium	10.	10.
		Uranium	10.	10.
		Cyanide	0.1	1.
		Asbestos	10.	0.

Calculated for each constituent (note: manganese is excluded, asbestos is included) as the product of the sample concentration (corrected by subtracting out background, solids in mg/Kg or water in ug/L) and human toxicity values (derived from the EPA HRS human toxicity values/1,000; SCDM. 1993). A separate product is calculated for each element and the element-products are summed for each sample.

For sample #1:

Constituent 1: (Sample conc. - background conc.) x Human toxicity value = _____

Constituent 2: (Sample conc. - background conc.) x Human toxicity value = _____

Constituent n: (Sample conc. - background conc.) x Human toxicity value = _____

The sum of the element-products is the human hazard value for sample #1 = _____

The human hazard value procedure is repeated for each sample collected at the site.

For sample #n:

Constituent 1: (Sample conc. - background conc.) x Human toxicity value = _____

Constituent n: (Sample conc. - background conc.) x Human toxicity value = _____

Sum of element-products (human hazard value) for sample #n = _____

The waste score (human) is calculated by multiplying the sample quantity value (Appendix B) and the human hazard value (calculated above) for each sample, summing the values for all samples, and then dividing by 10,000:

Sample #1: Sample quantity value x sample #1 human hazard value = _____

Sample #n: Sample quantity value x sample #n human hazard value = _____

The waste score (human) is the sum of the sample products divided by 10,000.

3.2.3 Ecological Hazard

Calculated for each constituent (note manganese is excluded) as the product of the sample concentration (corrected by subtracting out background, solids in mg/Kg or water in ug/L) and ecotoxicity values (derived from the EPA HRS ecotoxicity values/1,000; SCDM, 1993, see table in section 3.2.1). A separate product is calculated for each element and the element-products are summed for each sample.

For sample #1:

Constituent 1: (Sample conc. - background conc.) x ecotoxicity value = _____

Constituent 2: (Sample conc. - background conc.) x ecotoxicity value = _____

.

Constituent n: (Sample conc. - background conc.) x ecotoxicity value = _____

The sum of element-products is the ecohazard value for sample #1 = _____

The ecohazard value procedure is repeated for each sample collected at the site.

For sample #n:

Constituent 1: (Sample conc. - background conc.) x ecotoxicity value = _____

Constituent n: (Sample conc. - background conc.) x ecotoxicity value = _____

Sum of element-products (ecohazard value) for sample #n = _____

The waste score (ecologic) is calculated by multiplying the sample quantity value (Appendix B) and the ecohazard value (calculated above) for each sample, summing the values for all samples, and then dividing by 10,000:

Sample #1: Sample quantity value x sample #1 ecohazard value = _____

.

Sample #n: Sample quantity value x sample #n ecohazard value = _____

The waste score (ecologic) is the sum of the sample products divided by 10,000.

3.2.4 Surface Water Waste Characteristics Score

The total surface water waste characteristics score is the sum the waste score (human) and the waste score (ecologic).

3.3 SURFACE WATER TARGETS

The surface water targets score is evaluated by assessing those potential users of surface water within 15 miles downstream (same as HRS target distance limit), including environmental targets (wetlands, fisheries, etc.). The target scoring differs from the HRS in that it is simplified and includes a target that the HRS does not consider (impacted drainages).

3.3.1 Number of Persons Using Surface Water for Drinking Water

The number of persons using surface water for drinking water was compiled from Water Quality Bureau records regarding stream designations for drinking water supplies and

inventoried water systems. The total population served was adjusted for dilution of the receiving stream, per the HRS dilution factors. The potentially affected drinking water intakes that were used for sites evaluated in this assessment, and the appropriate dilution factors are listed below.

<u>Water System - Location</u>	<u>Service Population</u>	<u>Flow</u>	<u>Dilution Factor*</u>	<u>Adjusted Population</u>
Helena - Tenmile Creek intake	24,500	17 cfs	0.1	2,450
Butte - Basin Creek / Big Hole R.	33,744	19 cfs	0.1	3,374
Anaconda - Silver Lake pipeline	9,771	21 cfs	0.1	977

* The HRS dilution factor for receiving streams between 10 and 100 cfs = 0.1.

3.3.2 Impacted Drainage(s)

The distance of impacted stream/drainage downstream from the site with respect to sedimentation and acid mine drainage characteristics was recorded on the inventory form during the site visit. The value assigned is the distance in thousands of feet (observed impacted distance / 1,000).

3.3.3 Other Surface Water Uses

Other surface water resource use within 15 miles downstream were determined from the site visit, inspection of the MDFWP data base (fisheries, wetlands, threatened and endangered species), USGS topographic maps and USDA Forest Service maps, and the MDNRC water rights database. Assign these values as follows:

Wetlands (5 acre minimum) observed or in MDFWP database = 10; otherwise = 0.

Fishery class in MDFWP database: Class 1 = 20; Class 2 = 10; Class 3 = 5;
Class 4 = 1; Class 5, Class 6, or not classified = 0.

Recreational use at downstream parks or recreation areas (maps, observation) = 5; otherwise = 0.

Irrigation / Stock watering from MDNRC database, observed at site, or on maps = 2; else = 0.

Threatened/Endangered Species Habitat from MDFWP database = 5; otherwise = 0.

3.3.4 Surface Water Targets Score

The surface water targets score is the sum of the above seven values: drinking water use, impacted drainages, wetlands, fishery, recreation use, irrigation/stock watering, and threatened/endangered species habitat.

3.4 SURFACE WATER PATHWAY SCORE

The Surface Water Pathway score is the product of the Surface Water Likelihood of Release Score (section 3.1), the Surface Water Waste Characteristics Score (section 3.2), and the Surface Water Targets Score (section 3.3).

4.0 AIR PATHWAY

The air pathway is evaluated using three factors: the likelihood of release to the atmosphere, air waste characteristics, and air targets. The product of these three factors is the air pathway score.

4.1 AIR LIKELIHOOD OF RELEASE

The likelihood of release factor evaluates two subfactors for scoring: observed release to the air pathway and the potential to release to the air pathway.

4.1.1 Observed Release

An observed release to the air pathway is defined in three ways: materials that were observed blowing off the site during the site inspection (e.g. dust); evidence of wind deposited wastes was observed away from the waste sources (e.g. dunes); or, anecdotal evidence from other investigators, local residents, or other reliable sources. One or more constituents in the source must be at a concentration more than three times the background concentration. A score of 200 is assigned for an observed release to the air pathway meeting the above criteria, otherwise score 0.

4.1.2 Potential to Release

The potential to release constituents to the air pathway is evaluated using two criteria: the containment of the wastes at the site; and, the distance to the nearest population.

4.1.2.1 Containment

Containment is evaluated with respect to dust emissions (topsoil, vegetative cover, or perennially wet). Dust propagation potential was evaluated during the site visit and is recorded on the inventory form as high, moderate, low, or none. The dust potential was derived considering the percent of vegetative or other cover, available fines, topography, and moisture content. Using the highest dust propagation potential noted on the form, assign a value as follows: high dust potential = 20; moderate dust potential = 15; low dust potential = 10; no dust potential = 1.

4.1.2.2 Distance to nearest population

The shortest distance from any waste material to the nearest population (town) or individual residence was recorded on the AMRB inventory form during the site visit. Use this distance to assign a value as follows: less than 1,000 feet = 20; between 1,000 feet and 1/2 mile = 10; and, greater than 1/2 mile = 5.

4.1.2.3 Potential to release score

Calculate the potential to release score by multiplying the containment value by the distance value (Maximum score = 400).

4.1.3 Air Likelihood of Release Score

The Air Likelihood of Release Score is the sum of the observed release and potential to release scores (Maximum score = 600).

4.2 AIR WASTE CHARACTERISTICS

Waste characteristics for the air pathway are evaluated using the exposed surface area of waste materials (sources) at the site, the concentrations of constituents in samples of the waste material, the background concentrations, and the EPA HRS human toxicity and ecotoxicity values (SCDM, 1993).

4.2.1 Quantity

A quantity value is assigned according to measured estimates of exposed surface areas (in 100's of square feet) for each solid matrix source(s) or portions of a source, for which analytical data exist. Each sample collected at a site is assigned an exposed surface area that the sample represents (sample surface area assignments are tabulated on the waste characteristics worksheet). If a discrete surface sample was collected, only those analyses are used. This sample surface area was derived based on the source surface area(s) that the composite sample analyses represents (see SOP regarding XRF analyses and sample compositing; see also the AMRB Sampling and Analysis Plan; Pioneer, 1993).

This differs significantly from the HRS waste characteristics score calculation. The HRS only considers the most toxic constituent found at the site, does not consider the concentration, and applies the most toxic constituent to the entire area of wastes at the site. The AIMSS scoring method more fairly evaluates relative risks between sites, accounting for site specific constituent concentrations and the varying toxicity of different constituents. This method more accurately discriminates between sites with higher concentrations or more toxic constituents in relation to sites with lower concentrations or less toxic constituents. However, it is also more difficult to calculate.

Each sampled source at the site will be scored separately. Assign the sample quantity value, the toxicity value, and the ecotoxicity value as follows:

<u>Range</u> (100's of sq. ft.)	<u>Quantity</u> <u>Value</u>	<u>Constituent</u>	<u>Human</u> <u>Toxicity Value</u>	<u>Ecotoxicity</u> <u>Value</u>
less than 10	0.001	Antimony	10.	0.
10-100	0.01	Arsenic	10.	0.01
100-1,000	0.1	Barium	0.01	0.001
1,000-10,000	1.	Cadmium	10.	1.
10,000-100,000	10.	Chromium	10.	0.1
100,000-1,000,000	100.	Copper	0.	0.1
more than 1,000,000	1,000.	Iron	0.	0.01
		Lead	10.	1.
		Mercury	10.	10.
		Nickel	10.	0.01
		Zinc	0.01	0.01
		Thorium	10.	10.
		Uranium	10.	10.
		Cyanide	0.1	1.
		Asbestos	10.	0.

4.2.2 Human Hazard

Calculated for each constituent (note: manganese is excluded, asbestos is included) as the product of the sample concentration (in mg/Kg) and human toxicity values (derived from the EPA HRS human toxicity values/1,000; SCDM, 1993). Solid sample concentrations are corrected by subtracting background concentrations, and using the difference in the calculation. A separate product is calculated for each element and the element-products are summed for each sample.

For sample #1:

Constituent 1: (Sample conc. - background conc.) x Human toxicity value = _____

Constituent 2: (Sample conc. - background conc.) x Human toxicity value = _____

.

Constituent n: (Sample conc. - background conc.) x Human toxicity value = _____

The sum of the element-products is the human hazard value for sample #1 = _____

The human hazard value procedure is repeated for each sample collected at the site.

For sample #n:

Constituent 1: (Sample conc. - background conc.) x Human toxicity value = _____

Constituent n: (Sample conc. - background conc.) x Human toxicity value = _____

Sum of element-products (human hazard value) for sample #n = _____

The waste score (human) is calculated by multiplying the sample quantity value (Appendix B) and the human hazard value (calculated above) for each sample, summing the values for all samples, and then dividing by 10,000:

Sample #1: Sample quantity value x sample #1 human hazard value = _____

.

Sample #n: Sample quantity value x sample #n human hazard value = _____

The waste score (human) is the sum of the sample products divided by 10,000.

4.2.3 Ecological Hazard

Calculated for each constituent (note: manganese is excluded) as the product of the sample concentration (corrected by subtracting out background, in mg/Kg) and ecotoxicity values (derived from the EPA HRS ecotoxicity values/1,000; SCDM, 1993, see table in section 4.2.1). A separate product is calculated for each element and the element-products are summed for each sample.

For sample #1:

Constituent 1: (Sample conc. - background conc.) x ecotoxicity value = _____

Constituent 2: (Sample conc. - background conc.) x ecotoxicity value = _____

.

Constituent n: (Sample conc. - background conc.) x ecotoxicity value = _____

The sum of element-products is the ecohazard value for sample #1 = _____

The ecohazard value procedure is repeated for each sample collected at the site.

For sample #n:

Constituent 1: (Sample conc. - background conc.) x ecotoxicity value = _____

Constituent n: (Sample conc. - background conc.) x ecotoxicity value = _____

Sum of element-products (ecohazard value) for sample #n = _____

The waste score (ecologic) is calculated by multiplying the sample quantity value (Appendix B) and the ecohazard value (calculated above) for each sample, summing the values for all samples, and then dividing by 10,000:

Sample #1: Sample quantity value x sample #1 ecohazard value = _____

.

Sample #n: Sample quantity value x sample #n ecohazard value = _____

The waste score (ecologic) is the sum of the sample products divided by 10,000.

4.2.4 Air Pathway Waste Characteristics Score

The total air pathway waste characteristics score is the sum the waste score (human) and the waste score (ecologic).

4.3 AIR PATHWAY TARGETS

The air pathway targets score is evaluated by assessing population and environmental receptors near the site potentially affected by airborne releases of waste constituents from the site.

4.3.1 Population Within 4 Miles

Population within a 4-mile radius of the site was determined from available census information on larger municipalities, and from maps and field observations for smaller municipalities and rural populations. The four-mile distance is the same as the HRS target distance limit for the air pathway. To account for uncertainty in the population figures, population is intervalized into ranges (ranges are from the HRS) and recorded on the site inventory form: 0; 1-10; 10-30; 30-100; 100-300; 300-1,000; 1,000-3,000; 3,000-10,000, and >10,000. The lower value of the range is used to be conservative in assigning a population score. This value is assigned as the population within 4 miles.

4.3.2 Distance to Nearest Residence

The nearest residence score is an adjustment used to emphasize the greater risk to persons living close to the site (per the HRS). The distance to the nearest residence was observed during the site visit and recorded on the inventory form. Only the nearest residence is used (full-time or recreational use), regardless of the number or frequency of persons living at the residence. Assign a value as follows: less than 1000 feet = 10; between 1000 feet and 1/2 mile = 5; and, more than 1/2 mile or unknown = 0.

4.3.3 Sensitive Environments

Sensitive environments on or near the site (within the 4-mile target distance limit) are assigned air target scores, as in the HRS. Sensitive environments were determined from the site visit and inspection of the MDFWP data base (wetlands, threatened and endangered species). Assign these values as follows:

Wetlands (5 acre minimum) observed or in MDFWP database = 10; otherwise = 0.

National or State parks or wilderness areas = 10; otherwise = 0.

Threatened/Endangered Species Habitat from MDFWP database = 5; otherwise = 0.

4.3.4 Air Pathway Targets Score

The air pathway targets score is the sum of the above five values: population within 4 miles, nearest residence, wetlands, parks/wilderness, and threatened/endangered species habitat.

4.4 AIR PATHWAY SCORE

The air pathway score is the product of the Air Likelihood of Release Score (section 4.1), the Air Waste Characteristics Score (section 4.2), and the Air Targets Score (section 4.3).

5.0 DIRECT CONTACT

The direct contact exposure route is evaluated using three factors: the likelihood of exposure, direct contact waste characteristics, and direct contact targets. The product of these three factors is the direct contact score.

5.1 DIRECT CONTACT LIKELIHOOD OF EXPOSURE

The direct contact likelihood of exposure factor evaluates two subfactors for scoring: observed exposure and potential exposure.

5.1.1 Observed Exposure

Observed exposure is defined in two ways: residences observed on or within 200 feet of wastes; and, recreational activities occurring at the site during the site inspection, or observed evidence of previous recreational use at the site. One or more constituents in the waste materials must be at a concentration more than three times the background concentration. For residences observed on or within 200 feet, score 200; for recreational use, score 50; if neither were observed, score 0; if both were observed, score 250.

5.1.2 Potential Exposure

The potential for direct contact with constituents at the site is evaluated using two criteria: the accessibility of the wastes at the site; and, the distance to the nearest population or residence.

5.1.2.1 Accessibility

Accessibility of wastes at the site is evaluated with respect to the presence of fences, signs, physical barriers, gates, or guards, that restrict access to the site wastes by residents or recreational users. These access restrictions must be intact and at least

partially effective at limiting access by people. The most easily accessible waste at the site is assigned a value as follows: easily accessible - no fences, gates, or signs = 20; moderately accessible - barbed wire fences, road gated, and signs posted = 10; difficult access - chain link fence, road gated & locked = 5; and, not accessible - site completely fenced, access road gated & locked, site guarded (does not include locked or manned access points more than 1/2 mile from the actual abandoned mine site) = 1.

5.1.2.2 Distance to nearest population

The shortest distance from any waste material to the nearest population (town) or individual residence was recorded on the AMRB inventory form during the site visit. Use this distance to assign a value as follows: less than 1,000 feet = 20; between 1,000 feet and 1/2 mile = 10; and, greater than 1/2 mile = 5.

5.1.2.3 Potential exposure score

Calculate the potential exposure score by multiplying the accessibility value by the distance value (Maximum score = 400).

5.1.3 Direct Contact Likelihood of Exposure Score

The direct contact likelihood of exposure score is the sum of the observed exposure and potential exposure scores (Maximum score = 650).

5.2 DIRECT CONTACT WASTE CHARACTERISTICS

Waste characteristics for direct contact are evaluated using the exposed surface area of waste materials at the site, the concentrations of constituents in samples of the waste material, the background concentrations, and the EPA HRS human toxicity value (SCDM, 1993).

5.2.1 Quantity

A quantity value is assigned in the same manner as for the air pathway (section 4.2.1). Each sampled source at the site will be scored separately. Assign the sample quantity value and the toxicity value as follows:

Range (100's of sq. ft.)	Quantity Value	Element	Human Toxicity Value
less than 10	0.001	Antimony	10.
10-100	0.01	Arsenic	10.
100-1,000	0.1	Barium	0.01
1,000-10,000	1.	Cadmium	10.
10,000-100,000	10.	Chromium	10.
100,000-1,000,000	100.	Copper	0.
more than 1,000,000	1,000.	Iron	0.
		Lead	10.
		Mercury	10.
		Nickel	10.
		Zinc	0.01
		Thorium	10.
		Uranium	10.
		Cyanide	0.1
		Asbestos	10.

5.2.2 Hazard

Calculated for each constituent (note: manganese is excluded, asbestos is included) as the product of the sample concentration (corrected by subtracting out background, in mg/Kg) and human toxicity values (derived from the EPA HRS human toxicity values/1,000; SCDM, 1993). A separate product is calculated for each element and the element-products are summed for each sample.

For sample #1:

Constituent 1: (Sample conc. - background conc.) x Human toxicity value = _____

Constituent 2: (Sample conc. - background conc.) x Human toxicity value = _____

.

Constituent n: (Sample conc. - background conc.) x Human toxicity value = _____

The sum of the element-products is the hazard value for sample #1 = _____

The hazard value procedure is repeated for each sample collected at the site.

For sample #n:

Constituent 1: (Sample conc. - background conc.) x Human toxicity value = _____

Constituent n: (Sample conc. - background conc.) x Human toxicity value = _____

Sum of element-products (hazard value) for sample #n = _____

5.2.3 Direct Contact Waste Characteristics Score

The waste characteristics score is calculated by multiplying the sample quantity value (Appendix B) and the hazard value (calculated above) for each sample, summing the values for all samples, and then dividing by 10,000:

Sample #1: Sample quantity value x sample #1 hazard value = _____

Sample #n: Sample quantity value x sample #n hazard value = _____

The direct contact waste characteristics score is the sum of the sample products divided by 10,000.

5.3 DIRECT CONTACT TARGETS

The direct contact targets score is evaluated by assessing nearby receptors potentially affected by direct contact with waste constituents at the site.

5.3.1 Population Within 1 Mile

Population within a 1-mile radius of the site was determined from available census information on larger municipalities, and from maps and field observations for smaller municipalities and rural populations. The one-mile distance is the same as the HRS target distance limit for the direct contact (soil exposure pathway). To account for uncertainty in the population figures, population is intervalized into ranges (ranges are from the HRS) and recorded on the site inventory form: 0; 1-10; 10-30; 30-100; 100-300; 300-1,000; 1,000-3,000; 3,000-10,000, and >10,000. The lower value of the range is used to be conservative in assigning a population score. This value is assigned as the population within 1 mile.

5.3.2 Distance to Nearest Residence

The nearest residence score is an adjustment used to emphasize the relatively greater risk to persons living close to the site (per the HRS). The distance to the nearest residence was observed during the site visit and recorded on the inventory form. Only the nearest residence is used (full-time or recreational use), regardless of the number or frequency of persons living at the residence. Assign a value as follows: less than 1000 feet = 10; between 1000 feet and 1/2 mile = 5; and, more than 1/2 mile or unknown = 0.

5.3.3 Recreational Use

Recreational use of the site is an adjustment to account for direct contact with site wastes by persons who use the site for recreation, but do not live within the 1 mile radius around the site. The value is assigned based on an evaluation of several criteria, collectively

radius around the site. The value is assigned based on an evaluation of several criteria, collectively referred to as "attractiveness" in the HRS: proximity to populated areas, heavily travelled roads, or other recreation areas; uncommon features of the site which may attract recreationists; and, the amount of physical evidence of recreational use observed at the site. Assign a value as follows: high recreational use = 10; moderate use = 5; low use = 2; and, no use = 0.

5.3.4 Direct Contact Targets Score

The direct contact targets score is the sum of the above three values: population within 1 mile, nearest residence, and recreational use.

5.4 DIRECT CONTACT SCORE

The Direct Contact Score is the product of the Direct Contact Likelihood of Exposure Score (section 5.1), the Direct Contact Waste Characteristics Score (section 5.2), and the Direct Contact Targets Score (section 5.3).

6.0 MINE SITE HUMAN HEALTH AND ENVIRONMENTAL HAZARD SCORE

Sum the four pathway scores and divide by 100,000 to obtain the total site human health and environmental hazard score. $[\text{Groundwater Pathway Score (section 2.4)} + \text{Surface Water Pathway Score (section 3.4)} + \text{Air Pathway Score (section 4.4)} + \text{Direct Contact Score (section 5.4)}] / 100,000 = \text{Total Site Human Health and Environmental Hazard Score}.$

7.0 SITE SAFETY SCORE

The site safety score is evaluated using three factors: the safety threat (accessibility), safety hazards, and safety targets. The product of these three factors divided by 1,000 is the site safety score.

7.1 SAFETY THREAT

The potential threat of human contact with safety hazards at a site is evaluated using the relative accessibility to the safety hazard. Accessibility is evaluated with respect to the presence of fences, signs, physical barriers, gates, or guards, that restrict access by residents or recreational users to the site hazards. These access restrictions must be intact and at least partially effective at limiting access by people. The most easily accessible hazard is scored as follows: easily accessible - no fences, gates, or signs = 20; moderately accessible - barbed wire fences, road gated, and signs posted = 10; difficult access - chain link fence, road gated & locked = 5; and, not accessible - site completely fenced, access road gated & locked, site guarded (does not include locked

accessibility score is the same as the accessibility score in the Direct Contact section (5.1.2.1).

7.1.1 Safety Threat Score

The safety threat score is the accessibility of site hazards (Maximum = 20).

7.2 SAFETY HAZARDS

Safety hazards at the site are scored using the product of the quantity of various hazards and the relative hazard value assigned for each type of hazard. These hazards were recorded on the inventory form during the site visit.

Sum the number of open, hazardous, near-vertical stopes and shafts. Open means an opening that is large enough for a child to fall into, hazardous means that the sides of the opening are steep enough that the opening could not be exited easily (i.e. by a child).

Sum the number of open adits or near-horizontal openings, that are large enough and open enough for a curious child to enter.

Sum the number of unstable highwalls or open pits. Unstable refers to slopes, cuts, undercut banks, or piles that are at a slope that is greater than the angle of repose.

Sum the number of hazardous structures at the site. Hazardous refers to structurally unstable buildings, not all old buildings at the site.

Note the presence of explosives (includes blasting caps and decomposed explosives) at the site.

Note the presence of other hazardous materials (asbestos, chemicals, not including petroleum products).

Each hazard is scored separately by multiplying the quantity of each hazard by a hazard score to determine a hazard value. Assign hazard values as follows:

<u>Hazard and quantity</u>	<u>Score</u>	<u>Hazard Value</u>
Number of shafts and stopes	x 100	= _____
Number of adits and tunnels	x 50	= _____
Number of pits and unstable highwalls	x 75	= _____
Number of hazardous structures	x 40	= _____
Explosives present on site	= 50	_____
Other hazardous materials present	= 100	_____

7.2.1 Safety Hazards Score

Safety Hazards Score is the sum of all the above hazard values.

7.3 SAFETY TARGETS

The safety targets score is evaluated in the same manner as the direct contact targets.

7.3.1 Population Within 1 Mile

Population within a 1-mile radius of the site is the same as in the direct contact targets section.

7.3.2 Distance to Nearest Residence

The nearest residence score is the same as in the direct contact targets section.

7.3.3 Recreational Use

The recreational use score is the same as in the direct contact targets section.

7.3.4 Safety Targets Score

The safety targets score is the sum of the above three values: population within 1 mile, nearest residence, and recreational use.

7.4 SITE SAFETY SCORE

The Site Safety Score is the product of the Safety Threat Score (section 7.1), the Safety Hazards Score (section 7.2), and the Safety Targets Score (section 7.3) divided by 1,000.

8.0 REFERENCES

Federal Register, 1990. 40 CFR Part 300, Appendix A, 1990. Hazard Ranking System; Final Rule. Federal Register, Vol. 55, No. 241, Pages 51532-51667. Friday, December 14, 1990; Effective Date: March 14, 1991.

Pioneer, 1993. Final Sampling and Analysis Plan for the Abandoned Mines Hazardous Materials Inventory. Prepared for MDSL/AMRB by Pioneer Technical Services, Inc., August, 1993. Standard Operating Procedures are attached as Appendix B.

SCDM, 1993. Superfund Chemical Database Matrix (SCDM), Hazardous Substance Factor Values and Hazardous Substance Benchmarks (333 Substances), March 1993 version.

APPENDIX A

ABBREVIATED AIMSS SCORING INSTRUCTIONS AND FORM

GROUNDWATER PATHWAY

Groundwater Likelihood of Release:

Line 1: Observed release - An observed release is defined as a downgradient groundwater concentration at more than three times the upgradient groundwater concentration, for any constituent that can be attributed to the site. A constituent can be attributed to the site if the constituent exists in a source at the site at a concentration that is more than three times the background concentration. Groundwater concentrations can be measured in monitoring wells, domestic wells, or seeps/springs. Discharging adits are not considered observed releases for this score; they are considered sources and are evaluated later in the waste characteristics section. An observed release to groundwater, that can be documented using the above criteria, is assigned a score of 300, otherwise this score is 0.

Line 2: Exceedances - A downgradient groundwater concentration in a domestic use or monitoring well exceeding USEPA MCL's or MCLG's for a constituent that is attributable to the site, is assigned a score of 100, whether or not an observed release to groundwater can be documented.

Line 3: Potential to release - The potential to release constituents to groundwater is evaluated using two factors: the containment of the sources at the site with respect to engineered structures designed to mitigate effects to groundwater (e.g. liners, covers, runoff diversions); and, the estimated depth to groundwater.

Line 3a: Containment factor (use the least contained source):

No containment	20
Liner, runoff diversions, or covered (one)	10
Two of the above three structures	5
Completely contained (all of the above)	1

Line 3b: Estimated (or measured) depth to groundwater factor:

Shallow (less than 25 feet to water)	20
Moderate (25 to 100 feet)	10
Deep (greater than 100 feet)	2

Line 3c: Calculate the potential to release score by multiplying the containment factor by the depth factor (Maximum = 400).

Line 4: Groundwater Likelihood of Release Score is the sum of the observed release, exceedances, and potential to release scores (Maximum = 800).

Line 5: Groundwater Waste Characteristics:

Quantity - A quantity value is assigned according to estimated volumes in cubic yards (cy) for each solid matrix source(s) or portions of a source, for which analytical data were collected. Each sample collected at a site has been assigned a volume that the sample represents (sample volume assignments are tabulated on the waste characteristics worksheet). This representative volume was derived based on the source volume(s) that the composite sample analysis represents (see SOP regarding XRF analyses and sample compositing; see also the AMRB Sampling and Analysis Plan). Also, assign a value for each measured and sampled adit discharge in gallons per day (gpd = cubic feet per second X 646,272 gpd/cfs). Each media (solid or water) and sampled source at the site will be scored separately. Assign the sample quantity value as follows:

<u>Range</u> (cy or gpd)	<u>Quantity</u> <u>Value</u>	<u>Element</u>	<u>Human</u> <u>Toxicity Value</u>
less than 10	0.003	Antimony	10.
10-30	0.01	Arsenic	10.
30-100	0.03	Barium	0.01
100-300	0.1	Cadmium	10.
300-1,000	0.3	Chromium	10.
1,000-3,000	1.	Copper	0.
3,000-10,000	3.	Iron	0.
10,000-30,000	10.	Lead	10.
30,000-100,000	30.	Mercury	10.
100,000-300,000	100.	Nickel	10.
300,000-1,000,000	300.	Zinc	0.01
greater than 1,000,000	1,000.	Thorium	10.
		Uranium	10.
		Cyanide	0.1
		Asbestos	10.

Hazard - Calculated per element as the product of the sample concentration (corrected by subtracting out background, solids in mg/Kg or water in ug/L) and toxicity values (derived from the EPA HRS human toxicity values/1,000; see table above). Note manganese and asbestos are excluded from the groundwater calculation. A separate product is calculated for each element and the element-products are summed for each sample.

For sample #1:

Element 1: (Sample conc. - background conc.) x Human toxicity value = _____
Element n: (Sample conc. - background conc.) x Human toxicity value = _____
Sum of element-products (hazard score) for sample #1 = _____

For sample #n:

Element 1: (Sample conc. - background conc.) x Human toxicity value = _____

Element n: (Sample conc. - background conc.) x Human toxicity value = _____

Sum of element-products (hazard score) for sample #n = _____

The waste characteristics score is calculated by multiplying the sample quantity value and the hazard score for each sample, summing the values for all samples, and then dividing by 10,000:

Sample #1: Sample quantity value x sample #1 hazard score = _____

Sample #n: Sample quantity value x sample #n hazard score = _____

Line 5: Groundwater Waste Characteristics Score

Sum the sample quantity-hazard products _____ / 10,000.

Groundwater Targets:

Line 6: Number of wells within 1 mile x 2.5 persons/well = _____

Line 7: Number of wells located between 1 and 4 miles = _____

Line 8: Distance to nearest well:

Less than 1000 feet = 10

1000 feet to 1/2 mile (2,640 feet) = 5

more than 1/2 mile or unknown = 0

= _____

Line 9: Groundwater Targets Score - sum of these three values. = _____

LINE 10: The **GROUNDWATER PATHWAY SCORE** is the product of the Groundwater Likelihood of Release Score (Line 4), the Groundwater Waste Characteristics Score (Line 5), and the Groundwater Targets Score (Line 9).

SURFACE WATER PATHWAY

Surface Water Likelihood of Release:

Line 11: Observed release - An observed release is defined as a downstream surface water or stream sediment concentration at more than three times the upstream surface water or sediment concentration, for any constituent that can be attributed to the site. A constituent can be attributed to the site if the constituent exists in a source at the site at a concentration that is more than three times the background concentration. Discharging adits are not considered observed releases for this score; they are

considered sources and are evaluated later in the waste characteristics section. An observed release to surface water, that can be documented using the above criteria, is assigned a score of 300, otherwise this score is 0.

Line 12: Exceedances - A downstream surface water concentration that exceeds USEPA MCL's or MCLG's for a constituent that is attributable to the site, is assigned a score of 100, whether or not an observed release to surface water can be documented. A downstream surface water concentration exceeding USEPA or State acute AWQC's, but not MCL's, for a constituent that is attributable to the site, is assigned a score of 50 (do not add 50 if MCL's are exceeded).

Line 13: Potential to release - The potential to release constituents to surface water is evaluated using two factors: the containment of the sources at the site with respect to engineered structures designed to mitigate effects to surface water (via flooding and storm runoff) including dams, diversions, sediment basins, or other intact engineered systems; and, the shortest distance from any waste material to the nearest surface water body.

Line 13a: Containment factor (use the least contained source):

No functioning containment structures	20
One of the containment structures listed above	10
Completely contained with respect to surface water	1

Line 13b: Distance from waste material to nearest surface water:

Less than 25 feet	20
Between 25 and 100 feet	10
Greater than 100 feet	2

Line 13c: Calculate the potential to release score by multiplying the containment factor by the distance factor (Maximum = 400).

Line 14: Surface Water Likelihood of Release Score is the sum of the observed release, exceedances, and potential to release scores (Maximum = 800).

Line 15: Surface Water Waste Characteristics:

Quantity - A quantity value is assigned according to estimated volumes in cubic yards (cy) for each solid matrix source(s) or portions of a source, for which analytical data were collected. Each sample collected at a site has been assigned a volume that the sample represents (sample volume assignments are tabulated on the waste characteristics worksheet). This representative volume was derived based on the source volume(s) that the composite sample analysis represents (see SOP regarding XRF analyses and sample compositing; see also the AMRB Sampling and Analysis

Plan). Also, assign a value for each measured and sampled adit discharge in gallons per day (gpd = cubic feet per second X 646,272 gpd/cfs). Each media (solid or water) and sampled source at the site will be scored separately. Assign the sample quantity value as follows:

<u>Range</u> (cy or gpd)	<u>Quantity</u> <u>Value</u>	<u>Element</u>	<u>Human</u> <u>Toxicity Value</u>	<u>Ecotoxicity</u> <u>Value</u>
less than 10	0.003	Antimony	10.	0.
10-30	0.01	Arsenic	10.	0.01
30-100	0.03	Barium	0.01	0.001
100-300	0.1	Cadmium	10.	1.
300-1,000	0.3	Chromium	10.	0.1
1,000-3,000	1.	Copper	0.	0.1
3,000-10,000	3.	Iron	0.	0.01
10,000-30,000	10.	Lead	10.	1.
30,000-100,000	30.	Mercury	10.	10.
100,000-300,000	100.	Nickel	10.	0.01
300,000-1,000,000	300.	Zinc	0.01	0.01
greater than 1,000,000	1,000.	Thorium	10.	10.
		Uranium	10.	10.
		Cyanide	0.1	1.
		Asbestos	10.	0.

Human Hazard - Calculated per element as the product of the sample concentration (corrected by subtracting out background, solids in mg/Kg or water in ug/L) and toxicity values (derived from the EPA HRS human toxicity values/1,000; see table above). A separate product is calculated for each element and the element-products are summed for each sample.

For sample #1:

Element 1: (Sample conc. - background conc.) x Human toxicity value = _____

Element n: (Sample conc. - background conc.) x Human toxicity value = _____

Sum of element-products (hazard score) for sample #1 = _____

For sample #n:

Element 1: (Sample conc. - background conc.) x Human toxicity value = _____

Element n: (Sample conc. - background conc.) x Human toxicity value = _____

Sum of element-products (hazard score) for sample #n = _____

The waste score (human) is calculated by multiplying the quantity value and the hazard score for each sample, summing the values for all samples, and then dividing by 10,000:

Sample #1: Sample quantity value x sample #1 hazard score = _____

Sample #n: Sample quantity value x sample #n hazard score = _____

Sum of source-products (Waste Score - Human) for site = _____ /10,000.

Ecological Hazard - Calculated per element as the product of the sample concentration (corrected by subtracting out background, solids in mg/Kg or water in ug/L) and ecotoxicity values (derived from the EPA HRS ecotoxicity values/1,000; see table above). A separate product is calculated for each element and the element-products are summed for each sample.

For source #1:

Element 1: (Sample conc. - background conc.) x ecotoxicity value = _____
 Element n: (Sample conc. - background conc.) x ecotoxicity value = _____
 Sum of element-products (ecohazard score) for sample #1 = _____

For source #n:

Element 1: (Sample conc. - background conc.) x ecotoxicity value = _____
 Element n: (Sample conc. - background conc.) x ecotoxicity value = _____
 Sum of element-products (ecohazard score) for sample #n = _____

The waste score (ecologic) is calculated by multiplying the quantity value and the ecohazard score for each sample, summing the values for all samples, and then dividing by 10,000:

Sample #1: Sample quantity value x sample #1 ecohazard score = _____
 Sample #n: Sample quantity value x sample #n ecohazard score = _____
 Sum of source-products (Waste Score - Ecologic) for site = _____ /10,000.

Line 15: Surface Water Waste Characteristics Score -

Sum the Waste Score (Human) and the Waste Score (Ecologic).

Surface Water Targets Score:

Line 16: Number of persons using surface water for drinking water within 15 miles downstream, adjusted for dilution. = _____

Line 17: Distance (in 1,000's of feet) of impacted drainage(s) downstream from the site with respect to sedimentation or acid mine drainage characteristics. = _____

Other surface water uses within 15 miles downstream:

Line 18: Wetlands (5 acre minimum) = 10 = _____

Line 19: Fishery - Class 1 = 20
 Class 2 = 10
 Class 3 = 5
 Class 4 = 1 = _____

Line 20: Recreational use = 5 = _____

Line 21: Irrigation / Stock watering use = 2 = _____

Line 22: Threatened / Endangered Species Habitat = 5 = _____

Line 23: Surface Water Targets Score - sum of the above seven values.

LINE 24: The **SURFACE WATER PATHWAY SCORE** is the product of the Surface Water Likelihood of Release Score (Line 14), the Surface Water Waste Characteristics Score (Line 15), and the Surface Water Targets Score (Line 23).

AIR PATHWAY

Air Likelihood of Release:

Line 25: Observed release - An observed release is defined in three ways: materials that were observed blowing off the site during the site inspection; evidence of wind deposited wastes was observed away from the waste sources (e.g. dunes); or, anecdotal evidence from other investigators, residents, or other reliable sources. One or more constituents in the source must be at a concentration that is more than three times the background concentration. A score of 200 is assigned for an observed release to the air pathway meeting the above criteria, otherwise score 0.

Line 26: Potential to release - The potential to release constituents to the air pathway is evaluated using two factors: the containment of the sources with respect to dust emissions (topsoil, vegetative cover, or perennially wet); and, the distance to the nearest population or residence.

Line 26a: Containment factor (use the highest dust propagation potential noted on the inventory form during the site inspection - based on % cover, available fines, and moisture content):

High dust propagation potential	20
Moderate	15
Low	10
None	1

Line 26b: Distance from any source to the nearest population or residence:

Less than 1000 feet	20
1000 feet to 1/2 mile (2,640 feet)	10
Greater than 1/2 mile	5

Line 26c: Calculate the potential to release score by multiplying the containment factor by the distance factor (Maximum = 400).

Line 27: Air Likelihood of Release Score is the sum of the observed release and potential to release scores (Maximum = 600).

Line 28: Air Waste Characteristics:

Quantity - A quantity value is assigned according to estimated exposed surface areas (in 100's of square feet) for each solid matrix source(s) or portions of a source, for which analytical data were collected. Each sample collected at a site has been assigned a surface area that the sample represents (sample surface area assignments are tabulated on the waste characteristics worksheet). If a discrete surface sample was collected, only those analyses are used. This representative area was derived based on the source surface area(s) that the composite sample analysis represents (see SOP regarding XRF analyses and sample compositing; see also the AMRB Sampling and Analysis Plan). Each sampled source at the site will be scored separately. Assign the sample quantity value as follows:

<u>Range (100's of sq. ft.)</u>	<u>Quantity Value</u>	<u>Element</u>	<u>Human Toxicity Value</u>	<u>Ecotoxicity Value</u>
less than 10	0.001	Antimony	10.	0.
10-100	0.01	Arsenic	10.	0.01
100-1,000	0.1	Barium	0.01	0.001
1,000-10,000	1.	Cadmium	10.	1.
10,000-100,000	10.	Chromium	10.	0.1
100,000-1,000,000	100.	Copper	0.	0.1
greater than 1,000,000	1,000.	Iron	0.	0.01
		Lead	10.	1.
		Mercury	10.	10.
		Nickel	10.	0.01
		Zinc	0.01	0.01
		Thorium	10.	10.
		Uranium	10.	10.
		Cyanide	0.1	1.
		Asbestos	10.	0.

Human Hazard - Calculated per element as the product of the sample concentration (corrected by subtracting out background, in mg/Kg) and toxicity values (derived from the EPA HRS human toxicity values/1,000; see table above). A separate product is calculated for each element and the element-products are summed for each sample.

For sample #1:

Element 1: (Sample conc. - background conc.) x Human toxicity value = _____
 Element n: (Sample conc. - background conc.) x Human toxicity value = _____
 Sum of element-products (hazard score) for sample #1 = _____

For sample #n:

Element 1: (Sample conc. - background conc.) x Human toxicity value = _____

Element n: (Sample conc. - background conc.) x Human toxicity value = _____

Sum of element-products (hazard score) for sample #n = _____

The waste score (human) is calculated by multiplying the quantity value and the hazard score for each sample, summing the values for all samples, and then dividing by 10,000:

Sample #1: Sample quantity value x sample #1 hazard score = _____

Sample #n: Sample quantity value x sample #n hazard score = _____

Sum of source-products (Waste Score - Human) for site = _____ /10,000.

Ecological Hazard - Calculated per element as the product of the sample concentration (corrected by subtracting out background, in mg/Kg) and ecotoxicity values (derived from the EPA HRS ecotoxicity values/1,000; see table above). A separate product is calculated for each element and the element-products are summed for each sample.

For source #1:

Element 1: (Sample conc. - background conc.) x ecotoxicity value = _____

Element n: (Sample conc. - background conc.) x ecotoxicity value = _____

Sum of element-products (ecohazard score) for sample #1 = _____

For source #n:

Element 1: (Sample conc. - background conc.) x ecotoxicity value = _____

Element n: (Sample conc. - background conc.) x ecotoxicity value = _____

Sum of element-products (ecohazard score) for sample #n = _____

The waste score (ecologic) is calculated by multiplying the quantity value and the ecohazard score for each sample, summing the values for all samples, and then dividing by 10,000:

Sample #1: Sample quantity value x sample #1 ecohazard score = _____

Sample #n: Sample quantity value x sample #n ecohazard score = _____

Sum of source-products (Waste Score - Ecologic) for site = _____ /10,000.

Line 28: Air Waste Characteristics Score -

Sum the Waste Score (Human) and the Waste Score (Ecologic).

Air Targets:

Line 29: Population within 4 miles of the site

(use the lower value of range on the inventory form). = _____

Line 30: Distance to the nearest residence:

Less than 1000 feet = 10

1000 feet to 1/2 mile (2,640 feet) = 5

Greater than 1/2 mile = 0

= _____

Sensitive environments on or near the site:

Line 31: Wetlands = 10 = _____

Line 32: National or State Parks / Wilderness = 10 = _____

Line 33: Threatened or Endangered Species habitat = 5 = _____

Line 34: Air Targets Score - sum of the above five values.

LINE 35: The **AIR PATHWAY SCORE** is the product of the Air Likelihood of Release Score (Line 27), the Air Waste Characteristics Score (Line 28), and the Air Targets Score (Line 34).

DIRECT CONTACT

Direct Contact Likelihood of Exposure:

Line 36: Observed exposure - Observed exposure is defined in two ways: residences observed on or within 200 feet of a source; and, recreation activities on sources during the site inspection, or observed evidence of previous recreational use at the site. One or more constituents in the source must be at a concentration that is more than three times the background concentration. For residences, score 200; for recreation use, score 50; if neither were observed, score 0; if both were observed, score 250.

Line 37: Potential exposure - The potential for direct contact with constituents at the site is evaluated using two factors: the accessibility of the sources with respect to residents or recreational use (e.g. fences, signs, physical barriers, guards/watchmen); and, the distance to the nearest population or residence.

Line 37a: Accessibility of the site sources (most accessible source):

Easily accessible (no fences, gates, or signs) 20

Moderate (barbed wire fences, gated and signs) 10

Difficult (chain link fence, road gated & locked) 5

Not accessible (fence, road gated & locked, site manned) 1

Line 37b: Distance to nearest population or residence:

Less than 1000 feet	20
1000 feet to 1/2 mile (2,640 feet)	10
Greater than 1/2 mile	5

Line 37c: Calculate the potential exposure score by multiplying the accessibility factor by the distance factor (Maximum = 400).

Line 38: Direct Contact Likelihood of Exposure Score is calculated as the sum of the observed exposure and potential exposure scores (Maximum = 650).

Line 39: Direct Contact Waste Characteristics:

Quantity - A quantity value is assigned according to estimated exposed surface areas (in 100's of square feet) for each solid matrix source(s) or portions of a source, for which analytical data were collected. Each sample collected at a site has been assigned a surface area that the sample represents (sample surface area assignments are tabulated on the waste characteristics worksheet). If a discrete surface sample was collected, only those analyses are used. This representative area was derived based on the source surface area(s) that the composite sample analysis represents (see SOP regarding XRF analyses and sample compositing; see also the AMRB Sampling and Analysis Plan). Each sampled source at the site will be scored separately. Assign the sample quantity value as follows:

<u>Range</u> <u>(100's of sq. ft.)</u>	<u>Quantity</u> <u>Value</u>	<u>Element</u>	<u>Human</u> <u>Toxicity Value</u>
less than 10 (1,000 sq. ft.)	0.001	Antimony	10.
10-100	0.01	Arsenic	10.
100-1,000	0.1	Barium	0.01
1,000-10,000	1.	Cadmium	10.
10,000-100,000	10.	Chromium	10.
100,000-1,000,000	100.	Copper	0.
greater than 1,000,000	1,000.	Iron	0.
		Lead	10.
		Mercury	10.
		Nickel	10.
		Zinc	0.01
		Thorium	10.
		Uranium	10.
		Cyanide	0.1
		Asbestos	10.

Hazard - Calculated per element as the product of the sample concentration (corrected by subtracting out background, in mg/Kg) and toxicity values (derived from the EPA HRS human toxicity values/1,000; see table above). A separate product is calculated for each element and the element-products are summed for each sample.

For sample #1:

Element 1: (Sample conc. - background conc.) x Human toxicity value = _____

Element n: (Sample conc. - background conc.) x Human toxicity value = _____

Sum of element-products (hazard score) for sample #1 = _____

For sample #n:

Element 1: (Sample conc. - background conc.) x Human toxicity value = _____

Element n: (Sample conc. - background conc.) x Human toxicity value = _____

Sum of element-products (hazard score) for sample #n = _____

The waste characteristics score is calculated by multiplying the quantity value and the hazard score for each sample, summing the values for all samples, and then dividing by 10,000:

Sample #1: Sample quantity value x sample #1 hazard score = _____

Sample #n: Sample quantity value x sample #n hazard score = _____

Line 39: Direct Contact Waste Characteristics Score

Sum the sample quantity-hazard products _____ / 10,000.

Direct Contact Targets:

Line 40: Population within 1 mile of the site

(use the lower value of range on inventory form). = _____

Line 41: Distance to nearest residence:

Less than 1000 feet = 10

1000 feet to 1/2 mile (2,640 feet) = 5

Greater than 1/2 mile = 0

= _____

Line 42: Recreational use of the site:

High = 10

Moderate = 5

Low = 2

None = 0

= _____

Line 43: Direct Contact Targets Score - sum of the above three values.

LINE 44: The **DIRECT CONTACT SCORE** is the product of the Direct Contact Likelihood of Exposure Score (Line 38), the Direct Contact Waste Characteristics Score (Line 39), and the Direct Contact Targets Score (Line 43).

LINE 45: MINE SITE HUMAN HEALTH AND ENVIRONMENTAL HAZARD SCORE

Sum the four pathway scores and divide by 100,000 to obtain the total site human health and environmental hazard score. [Groundwater pathway score + Surface water pathway score + Air pathway score + Direct contact score] / 100,000 = Total site human health and environmental hazard score.

SITE SAFETY SCORE

Safety Threat:

The potential threat of contact with safety hazards at a site is evaluated using the relative accessibility of the safety hazard with respect to nearby residents and/or recreational users (e.g. fences, signs, physical barriers, guards/watchmen).

Line 1: Accessibility of the site hazards (most accessible hazard):

Easily accessible (no fences, gates, or signs)	20
Moderate (barbed wire fences, gated and signs)	10
Difficult (chain link fence, road gated & locked)	5
Not accessible (fence, road gated & locked, site manned)	1

Line 1: Safety Threat Score is the accessibility of site hazards (Maximum = 20).

Safety Hazards:

Sum the number of open near-vertical stopes and shafts that are large enough for a child to fall into. Sum the number of open adits or near-horizontal openings large enough for a child to enter.

Sum the number of unstable (slope greater than angle of repose) highwalls or open pits. Sum the number of hazardous structures (structurally unstable) at the site. Note the presence of explosives or other hazardous materials (asbestos, chemicals, not petroleum products).

Each hazard is scored separately by multiplying the quantity of each hazard by a hazard score to determine a hazard value. Assign hazard values as follows:

Hazard and quantity	Score	Hazard Value
Line 2: # of shafts and stopes	x 100	= _____
Line 3: # of adits and tunnels	x 50	= _____
Line 4: # of pits and unstable highwalls	x 75	= _____
Line 5: # of hazardous structures	x 40	= _____
Line 6: Explosives present on site	= 50	_____
Line 7: Other hazardous materials present	= 100	_____

Line 8: Safety Hazards Score is the sum of all the above hazard values.

Safety Targets:

Line 9: Population within 1 mile of the site
(use the lower value of range on inventory form). = _____

Line 10: Distance to the nearest residence:

Less than 1000 feet	= 10	
1000 feet to 1/2 mile (2,640 feet)	= 5	
Greater than 1/2 mile	= 0	
		= _____

Line 11: Recreational use at the site:

High	= 10	
Moderate	= 5	
Low	= 2	
None	= 0	
		= _____

Line 12: Safety Targets Score is the sum of these three values.

LINE 13: The **SITE SAFETY SCORE** is the product of the Safety Threat Score (Line 1), the Safety Hazards Score (Line 8), and the Safety Targets Score (Line 12) divided by 1,000.

AIMSS SCORESHEET

SITE NAME: _____

PA NUMBER: _____

LINE NO.	<u>GROUNDWATER PATHWAY</u>		
1		OBSERVED RELEASE	
2		EXCEEDENCES	
3A	GW - LIKELIHOOD OF RELEASE	CONTAINMENT	
3B		GW DEPTH	
3C		POTENTIAL TO RELEASE	LINES 3A x 3B
4		LIKELIHOOD SCORE	LINES 1 + 2 + 3C
5	GW - WASTE CHAR.	CALCULATED SCORE	(SEE WORKSHEET)
6	GW - TARGETS	WELLS - 1 MI. x 2.5	
7		WELLS - 1 TO 4 MI	
8		NEAREST WELL	
9		TARGETS SCORE	LINES 6 + 7 + 8
10	GROUNDWATER SCORE		LINES 4 x 5 x 9
<u>SURFACE WATER PATHWAY</u>			
11	SW - LIKELIHOOD OF RELEASE	OBSERVED RELEASE	
12		EXCEEDENCES	
13A		CONTAINMENT	
13B		DISTANCE TO SW	
13C		POTENTIAL TO RELEASE	LINES 13A x 13B
14		LIKELIHOOD SCORE	LINES 11 + 12 + 13C
15	SW - WASTE CHAR.	CALCULATED SCORE	(SEE WORKSHEET)
16	SW - TARGETS	DRINKING WATER POP'N	
17		IMPACTED DRAINAGE	
18		WETLANDS	
19		FISHERY	
20		RECREATION	
21		IRRIGATION/STOCK	
22		T & E SPECIES HABITAT	
23		TARGETS SCORE	SUM LINES 16 - 22
24	SURFACE WATER SCORE		LINES 14 x 15 x 23
<u>AIR PATHWAY</u>			
25	AIR - LIKELIHOOD OF RELEASE	OBSERVED RELEASE	
26A		CONTAINMENT	
26B		DISTANCE TO POP'N	
26C		POTENTIAL TO RELEASE	LINES 26A x 26B
27		LIKELIHOOD SCORE	LINES 25 + 26C
28	AIR - WASTE CHAR.	CALCULATED SCORE	(SEE WORKSHEET)
29	AIR - TARGETS	POPULATION - 4 MILES	
30		NEAREST RESIDENCE	
31		WETLANDS	
32		PARKS / WILDERNESS	
33		T & E SPECIES HABITAT	
34		TARGETS SCORE	SUM LINES 29 - 33
35	AIR PATHWAY SCORE		LINES 27 x 28 x 34
<u>DIRECT CONTACT PATHWAY</u>			
36	LIKELIHOOD OF EXPOSURE	OBSERVED EXPOSURE	
37A		ACCESSIBILITY	
37B		DISTANCE TO POP'N	
37C		POTENTIAL EXPOSURE	LINES 37A x 37B
38		LIKELIHOOD SCORE	LINES 36 + 37C
39	D. C. WASTE CHAR.	CALCULATED SCORE	(SEE WORKSHEET)
40	DIRECT CONTACT TARGETS	POPULATION - 1 MILE	
41		NEAREST RESIDENCE	
42		RECREATIONAL USE	
43		TARGETS SCORE	SUM LINES 40 - 42
44	DIRECT CONTACT SCORE		LINES 38 x 39 x 43
45	TOTAL SITE HUMAN & ENVIRONMENTAL HAZARD SCORE (LINES 10 + 24 + 35 + 44) / 100,000		

	SITE SAFETY		
1	THREAT	ACCESSIBILITY	
2	HAZARDS	OPEN SHAFTS	100 EA.
3		OPEN ADITS	50 EA.
4		UNSTAB. HIWALLS / PITS	75 EA.
5		HAZ. STRUCTURES	40 EA.
6		EXPLOSIVES	
7		HAZ. MATERIALS	
8		HAZARDS SCORE	SUM LINES 2 - 7
9	TARGETS	POPULATION - 1 MILE	
10		NEAREST RESIDENCE	
11		RECREATIONAL USE	
12		TARGETS SCORE	SUM LINES 9 - 11
13		SITE SAFETY SCORE	(LINES 1 x 8 x 12) / 1,000

APPENDIX B

WASTE CHARACTERISTICS WORKSHEET

WASTE CHARACTERISTICS SCORE WORKSHEET

PA NUMBER	SAMPLE NUMBER	WASTE VOLUME (CU. YD.)	UNCOV WASTE AREA (SQ. FT.)	ADIT FLOW (CFS)	GRND W. WASTE CHAR. SCORE	SURF W. WASTE CHAR. SCORE	AIR WASTE CHAR. SCORE	DIR. CONT. WASTE CHAR. SCORE
01-005	01-005-TP-1	200000	333000	0.000	352.8028	356.2894	3.5629	3.5280
01-006	APEX MILL- TP1	19000	29700	0.000	8.6576	11.6738	0.1167	0.0866
01-006	APEX MILL- TP2	50800	62100	0.000	32.2655	36.9872	0.1233	0.1076
01-031	01-031-TP-1	34850	76375	0.000	33.9503	38.5126	0.1284	0.1132
01-031	01-031-TP-2	34850	76375	0.000	40.5501	46.4774	0.1549	0.1352
01-031	01-031-TP-3	18700	63000	0.000	4.9325	5.7078	0.0571	0.0493
01-031	01-031-WR-1	17000	31680	0.000	0.0193	0.4324	0.0043	0.0002
01-031	01-031-WR-2	240000	438975	0.000	6.8079	11.2842	0.1128	0.0681
01-034	01-034-WR-1	2233	8400	0.000	1.1876	1.4770	0.0148	0.0119
01-034	01-034-SG-1	2600	10800	0.000	0.1161	0.3208	0.0321	0.0116
01-034	01-034-WR-2	4467	16800	0.000	1.0974	1.1461	0.0382	0.0366
01-034	01-034-WR-3	2920	10125	0.000	5.6619	5.9152	0.5915	0.5662
01-034	01-034-WR-4	5870	18090	0.000	3.4892	3.7654	0.1255	0.1163
01-092	01-092-WR-1	500	63000	0.000	0.0001	0.0011	0.0004	0.0000
01-092	01-092-TP-1	290	790	0.000	0.0014	0.0038	0.0000	0.0000
01-094	01-094-WR-1	1130	4500	0.000	33.6881	37.1501	0.3715	0.3369
01-112	01-112-WR-1	4160	22410	0.000	1.0773	1.1062	0.0369	0.0359
01-143	01-143-WR-1	14000	45000	0.000	107.1725	117.2976	1.1730	1.0717
01-143	01-143-WR-2	35000	126000	0.000	70.2041	76.2328	2.5411	2.3401
01-144	01-144-WR-1	6700	16200	0.000	2.2553	2.3904	0.0797	0.0752
01-144	01-144-TP-1	730	4110	0.000	2.7533	3.0145	0.1005	0.0918
01-144	01-144-TP-2	730	0	0.000	4.6661	5.1198	0.0000	0.0000
01-169	01-169-WR-1	14285	30857	0.000	0.1274	0.1883	0.0019	0.0013
01-169	01-169-WR-2	35715	77143	0.000	24.5568	27.0893	0.0903	0.0819
01-169	01-169-GW-1	0	0	0.334	19.7000	22.5000	0.0000	0.0000
01-170	01-170-TP-2	11500	0	0.000	0.7841	0.8057	0.0000	0.0000
01-170	01-170-TP-4	52333	0	0.000	2.9386	4.5044	0.0000	0.0000
01-170	01-170-TP-5	15000	15680	0.000	0.0783	0.3389	0.0034	0.0008
01-170	01-170-WR-1	11700	37800	0.000	0.1623	0.4339	0.0043	0.0016
01-170	01-170-TP-1	34500	11325	0.000	0.0755	0.3148	0.0010	0.0003
01-170	01-170-TP-3	263667	105860	0.000	0.4849	1.9594	0.0196	0.0048
01-211	01-211-WR-1	200	1890	0.000	0.2412	0.3716	0.0372	0.0241
01-211	01-211-WR-2	200	1890	0.000	0.0151	0.0205	0.0020	0.0015
01-216	01-216-WR-1	13000	36000	0.000	10.9119	21.1890	0.2119	0.1091
01-220	01-220-WR-1	11000	10350	0.000	2.4858	3.9169	0.0392	0.0249
01-262	01-262-WR-1	2185	2590	0.000	0.1672	0.2120	0.0021	0.0017
01-262	01-262-GW-1	0	0	0.002	0.1000	0.1000	0.0000	0.0000
01-270	01-270-WR-1	1070	7740	0.000	1.8873	2.0848	0.0208	0.0189
01-270	01-270-GW-1	0	0	0.003	0.1000	0.1000	0.0000	0.0000
04-008	04-008-TP-1	1450	4950	0.000	5.1831	5.6875	0.0569	0.0518
04-008	04-008-WR-1	36000	98325	0.000	207.9062	227.8892	0.7596	0.6930
04-008	04-008-WR-2	1900	64980	0.000	4.4681	4.9330	0.4933	0.4468
04-008	04-008-WR-3	37000	52925	0.000	123.6988	136.4987	0.4550	0.4123
04-008	04-008-SW-3	0	0	0.027	0.7000	0.7000	0.0000	0.0000
04-009	04-009-WR-1	19500	40500	0.000	2.9421	3.6819	0.0368	0.0294
04-009	04-009-TP-1	17000	40500	0.000	3.6471	4.3404	0.0434	0.0365
04-009	04-009-TP-2	20000	45000	0.000	2.2343	2.5450	0.0254	0.0223
04-012	04-012-WR-3	7000	7650	0.000	69.1208	73.2189	0.2441	0.2304
04-012	04-012-TP-1	60	3150	0.000	0.1604	0.1728	0.0576	0.0535
04-012	04-012-WR-1	30000	46870	0.000	388.4346	414.2678	1.3809	1.2948
04-012	04-012-WR-2	27740	54810	0.000	216.5973	229.7195	2.2972	2.1660
04-012	04-012-GW-1	0	0	0.600	225.8000	233.5000	0.0000	0.0000
04-013	04-013-WR-1	17000	39600	0.000	73.9350	76.6228	0.7662	0.7394
04-013	04-013-LP-1	1300	8000	0.000	3.1542	3.2684	0.0327	0.0315
04-014	04-014-WR-1	550	3420	0.000	0.7845	0.8130	0.0271	0.0261
04-014	04-014-WR-2	2800	5265	0.000	0.1294	0.1321	0.0013	0.0013

WASTE CHARACTERISTICS SCORE WORKSHEET

PA NUMBER	SAMPLE NUMBER	WASTE VOLUME (CU. YD.)	UNCOV WASTE AREA (SQ. FT.)	ADIT FLOW (CFS)	GRND W. WASTE CHAR. SCORE	SURF W. WASTE CHAR. SCORE	AIR WASTE CHAR. SCORE	DIR. CONT. WASTE CHAR. SCORE
04-014	04-014-WR-3	26500	38790	0.000	45.6410	46.6301	0.4663	0.4564
04-014	04-014-TP-1	42000	51975	0.000	528.2295	544.7005	1.8157	1.7608
04-014	04-014-SW-5	0	0	0.022	3.2000	3.3000	0.0000	0.0000
04-015	04-015-WR-1	14400	34020	0.000	0.7379	7.0691	0.0707	0.0074
04-015	04-015-TP-1	9000	34200	0.000	0.0610	0.3285	0.0109	0.0020
04-020	04-020-WR-1	52000	63180	0.000	0.2557	0.7271	0.0024	0.0009
04-020	04-020-WR-2	19000	30700	0.000	0.3228	0.3479	0.0035	0.0032
04-020	04-020-TP-1	220	1710	0.000	0.0004	0.0022	0.0002	0.0000
04-121	04-121-TP-1	66000	129600	0.000	5.2410	6.1771	0.2059	0.1747
04-121	04-121-TP2	78300	158625	0.000	29.9712	33.2768	1.1092	0.9990
04-138	04-138-WR-1	5500	15376	0.000	0.3613	0.4475	0.0149	0.0120
04-138	04-138-WR-2	2000	2183	0.000	0.0759	0.1345	0.0013	0.0008
04-138	04-138-WR-3	4450	12156	0.000	8.9011	9.9816	0.3327	0.2967
04-138	04-138-SW-1	0	0	0.022	2.0000	2.8000	0.0000	0.0000
04-144	04-144-WR-1	4360	5886	0.000	0.2625	0.3384	0.0011	0.0009
04-144	04-144-SW-1	0	0	0.022	0.6000	0.6000	0.0000	0.0000
07-080	07-080-WR-1	2550	7226	0.000	0.1167	0.1293	0.0013	0.0012
07-080	07-080-WR-2	2910	9805	0.000	0.0284	0.0316	0.0003	0.0003
07-084	07-084-WR-1	18540	30900	0.000	0.4126	0.4461	0.0045	0.0041
07-084	07-084-WR-2	80000	54935	0.000	6.7902	7.0405	0.0235	0.0226
07-084	07-084-GW-1	0	0	0.089	2.1000	2.2000	0.0000	0.0000
07-084	07-084-GW-2	0	0	0.033	12.6000	13.9000	0.0000	0.0000
07-087	07-087-WR1	7100	17100	0.000	29.2153	32.1830	1.0728	0.9738
07-087	07-087-WR2	2880	19720	0.000	0.2656	0.2958	0.0296	0.0266
07-087	07-087-TP1	1200	3040	0.000	0.8277	0.9098	0.0091	0.0083
07-087	07-087-GW-1	0	0	0.089	3.7000	3.8000	0.0000	0.0000
07-090	BLOCK P TAILS	625000	650000	0.000	1729.4998	1876.8353	6.2561	5.7650
07-094	07-094-WRD1	2800	6450	0.000	9.1823	10.0914	0.1009	0.0918
07-094	07-094-WRD2	500	1620	0.000	4.0566	4.4578	0.1486	0.1352
07-094	07-094-CONC	10	180	0.000	0.0360	0.0393	0.0039	0.0036
07-094	07-094-GW-1	0	0	0.027	1.6000	1.9000	0.0000	0.0000
07-100	07-100-WR1	200	3520	0.000	0.1686	0.1858	0.0186	0.0169
07-100	07-100-WR4	390	1150	0.000	0.0429	0.0485	0.0016	0.0014
07-100	07-100-GW-2	0	0	0.011	0.3000	0.3000	0.0000	0.0000
07-100	07-100-GW-3	0	0	0.004	0.0426	0.0439	0.0000	0.0000
07-103	07-103-LT-2	30000	0	0.000	129.9199	143.9416	0.0000	0.0000
07-103	07-103-LT-1	30000	270000	0.000	218.8931	242.3215	8.0774	7.2964
07-103	07-103-UT1	25500	223650	0.000	40.7399	45.2968	4.5297	4.0740
07-103	07-103-UT2	25500	0	0.000	31.6326	35.1456	0.0000	0.0000
07-110	07-110-WR5	2663	13383	0.000	11.1286	12.2579	1.2258	1.1129
07-110	07-110-WR6	615	1944	0.000	1.0610	1.1740	0.0391	0.0354
07-111	07-111-WR-1	8720	24165	0.000	14.1238	15.5231	0.5174	0.4708
07-111	07-111-WR-2	285	2835	0.000	0.5820	0.6416	0.0642	0.0582
07-111	07-111-GW-1	0	0	0.082	11.1000	12.2000	0.0000	0.0000
07-112	07-112-WR-1	2010	8235	0.000	18.5465	20.4135	0.2041	0.1855
07-112	07-112-GW-1	0	0	0.005	0.6000	0.6000	0.0000	0.0000
07-113	07-113-WR1-AX	27	382	0.000	0.0354	0.0393	0.0039	0.0035
07-113	07-113-WR1-BX	28	383	0.000	0.0423	0.0467	0.0047	0.0042
07-120	07-120-WR-1	4200	8100	0.000	5.5585	6.1469	0.0205	0.0185
07-120	07-120-TP-1	50	5000	0.000	0.2215	0.2438	0.0813	0.0738
07-121	07-121-WR-1	3015	9765	0.000	5.4661	6.0521	0.0202	0.0182
07-121	07-121-WR-5	3600	11115	0.000	22.3487	24.7423	0.8247	0.7450
07-121	07-121-WR-6	3400	8460	0.000	65.9435	72.5734	0.2419	0.2198
07-121	07-121-GW-1	0	0	0.011	6.0000	6.9000	0.0000	0.0000
07-129	07-129-WRD-1	1800	9000	0.000	9.2220	10.0529	0.1005	0.0922
07-129	07-129-GW-1	0	0	0.000	0.0000	0.0000	0.0000	0.0000

WASTE CHARACTERISTICS SCORE WORKSHEET

PA NUMBER	SAMPLE NUMBER	WASTE VOLUME (CU. YD.)	UNCOV WASTE AREA (SQ. FT.)	ADIT FLOW (CFS)	GRND W. WASTE CHAR. SCORE	SURF W. WASTE CHAR. SCORE	AIR WASTE CHAR. SCORE	DIR. CONT. WASTE CHAR. SCORE
07-129	07-129-GW-2	0	0	0.000	0.0000	0.0000	0.0000	0.0000
07-134	07-134-TP1-1	11250	70000	0.000	51.7536	56.9007	0.5690	0.5175
07-134	07-134-TP1-2	11250	0	0.000	66.5312	73.0878	0.0000	0.0000
07-134	07-134-TP2	600	4000	0.000	9.7530	10.7316	0.3577	0.3251
07-135	07-135-WR1	7600	20475	0.000	93.9844	103.5877	3.4529	3.1328
07-135	07-135-WR2	4500	23580	0.000	48.0209	53.0300	1.7677	1.6007
07-135	07-135-SW-1	0	0	1.000	917.9000	1055.1000	0.0000	0.0000
07-137	07-137-TP1	24675	87188	0.000	79.9833	88.5243	0.8852	0.7998
07-137	07-137-TP2	24675	87187	0.000	135.9512	150.2860	1.5029	1.3595
07-137	07-137-TP6	7000	72000	0.000	6.9085	7.6525	0.2551	0.2303
07-138	07-138-WR1	4000	15660	0.000	23.8580	26.3768	0.8792	0.7953
07-138	07-138-WR2	54000	85500	0.000	231.2980	255.8711	0.8529	0.7710
07-138	07-138-TP1	24600	52830	0.000	42.5990	47.2042	0.4720	0.4260
07-142	07-142-WR-AX	100	2160	0.000	0.0003	0.0012	0.0001	0.0000
07-142	07-142-WR-BX	100	2160	0.000	0.7942	0.8786	0.0879	0.0794
07-156	07-156-WR1	1100	8640	0.000	0.4554	0.4938	0.0049	0.0046
07-156	07-156-WR2	700	9000	0.000	0.8217	0.8978	0.0299	0.0274
07-156	07-156-WRD3	20000	27900	0.000	7.6962	8.2969	0.0830	0.0770
07-156	07-156-WR-4	4000	11160	0.000	3.2047	3.4676	0.1156	0.1068
07-156	07-156-TP-2	500	1040	0.000	0.6966	0.7607	0.0254	0.0232
07-156	07-156-TP3A	600	1260	0.000	0.0420	0.0434	0.0014	0.0014
07-156	07-156-TP3B	600	0	0.000	0.0976	0.1043	0.0000	0.0000
07-156	07-156-SW3	0	0	0.060	6.7000	7.4000	0.0000	0.0000
07-180	07-180-WR-1	455	3330	0.000	0.1216	0.1341	0.0045	0.0041
12-003	12-003-WR-1	6500	45760	0.000	0.1680	0.2004	0.0067	0.0056
12-003	12-003-TP-1	5700	41800	0.000	0.3374	0.3486	0.0116	0.0112
12-003	12-003-GW-1	0	0	0.027	1.1000	1.7000	0.0000	0.0000
12-004	12-004-WR-1	27200	71280	0.000	1.3370	1.9163	0.0192	0.0134
12-004	12-004-TP-1	4356	11760	0.000	0.6564	0.8630	0.0288	0.0219
12-004	12-004-TP-3	5000	2700	0.000	0.4361	0.6781	0.0023	0.0015
12-070	12-070-TP-1	7300	31500	0.000	0.1235	0.1366	0.0046	0.0041
12-070	12-070-TP-2	1870	12600	0.000	0.0001	0.0002	0.0000	0.0000
14-010	14-010-WR-1	3800	6035	0.000	0.8279	0.8731	0.0029	0.0028
14-010	14-010-GW-1	0	0	0.003	0.1000	0.1000	0.0000	0.0000
14-017	14-017-TP-2	10	0	0.000	0.0081	0.0088	0.0000	0.0000
14-017	14-017-TP-1	1210	1780	0.000	0.1022	0.1051	0.0011	0.0010
14-017	14-017-WR-1	105	1160	0.000	0.1290	0.1415	0.0141	0.0129
14-017	14-017-WR-2	2830	1890	0.000	1.3044	1.4653	0.0147	0.0130
15-012	15-012-TP-1	525	4075	0.000	1.0809	1.1836	0.0395	0.0360
15-012	15-012-WR-1	19000	67500	0.000	38.7106	42.2938	0.4229	0.3871
15-012	15-012-WR-2	50500	262800	0.000	521.0536	570.9257	19.0309	17.3685
15-012	15-012-WR-3	18550	97650	0.000	18.9089	20.5988	0.2060	0.1891
15-012	15-012-WR-4	1530	6550	0.000	25.2192	27.5189	0.2752	0.2522
15-012	15-012-GW-1	0	0	0.002	2.9000	3.3000	0.0000	0.0000
15-012	15-012-GW-2	0	0	0.056	2.9000	3.5000	0.0000	0.0000
16-013	16-013-WR-1	7150	12199	0.000	0.0645	0.1165	0.0039	0.0022
16-015	16-015-WR-1	5000	20250	0.000	0.0043	0.0043	0.0001	0.0001
16-018	16-018-WR-1	4400	6480	0.000	150.0000	150.0000	0.5000	0.5000
16-018	16-018-WR-2	15	125	0.000	0.5000	0.5000	0.0500	0.0500
20-002	20-002-WR-1	22000	18000	0.000	86.5809	87.1822	0.8718	0.8658
20-002	20-002-WR-2	40000	99000	0.000	99.5276	101.1079	0.3370	0.3318
20-002	20-002-TP-1	40	1800	0.000	0.1206	0.1229	0.0410	0.0402
20-003	20-003-TP1A	63000	55250	0.000	161.8390	166.8285	0.5561	0.5395
20-003	20-003-TP1B	63000	55250	0.000	103.6276	105.4985	0.3517	0.3454
20-003	20-003-TP2A	101400	36000	0.000	283.9522	290.4376	0.2904	0.2840
20-003	20-003-TP2B-A	33800	36000	0.000	58.2514	59.3538	0.1978	0.1942

WASTE CHARACTERISTICS SCORE WORKSHEET

PA		WASTE	UNCOV		GRND W.	SURF W.	AIR	DIR. CONT.
NUMBER	SAMPLE	VOLUME	WASTE	ADIT	WASTE	WASTE	WASTE	WASTE
	NUMBER	(CU. YD.)	AREA	FLOW	CHAR.	CHAR	CHAR.	CHAR.
			(SQ. FT.)	(CFS)	SCORE	SCORE	SCORE	SCORE
20-003	20-003-TP2B-B	33800	0	0.000	121.9073	125.1995	0.0000	0.0000
20-004	20-004-WR-1	5000	24858	0.000	14.4217	15.8647	0.5288	0.4807
20-004	20-004-WR-3	2000	16560	0.000	62.1415	68.3499	6.8350	6.2141
20-004	20-004-WR-4	1000	2520	0.000	0.5450	0.7150	0.0072	0.0055
20-004	20-004-TP-1	4000	17820	0.000	21.6000	23.7308	0.7910	0.7200
20-004	20-004-TP-2	11000	44370	0.000	23.9121	26.9185	0.2692	0.2391
20-004	20-004-TP-3	8000	17820	0.000	3.1194	3.6342	0.1211	0.1040
20-004	20-004-GW-1	0	0	0.045	0.6000	0.7000	0.0000	0.0000
20-005	20-005-WR-1	27700	45900	0.000	8.4381	9.3206	0.0932	0.0844
20-005	20-005-WR-2	4800	22500	0.000	6.2602	6.6479	0.2216	0.2087
20-005	20-005-WR-3	17000	31500	0.000	21.4425	23.1183	0.2312	0.2144
20-009	20-009-TP-1	69500	748800	0.000	565.7537	621.5269	20.7176	18.8585
20-012	20-012-TP-1	475	16335	0.000	1.1157	1.2103	0.4034	0.3719
20-012	20-012-TP-2	970	51300	0.000	1.0751	1.1611	0.3870	0.3584
20-012	20-012-WR-1	3200	3870	0.000	24.3328	26.5414	0.0885	0.0811
20-018	20-018-WR-1	22000	45900	0.000	0.0247	0.1524	0.0015	0.0002
20-018	20-018-TP-1	2800	5130	0.000	0.7032	0.7468	0.0075	0.0070
20-018	20-018-SW-2	0	0	0.029	0.5000	0.5000	0.0000	0.0000
20-019	20-019-WR-1	218000	29580	0.000	342.4138	374.4676	0.3745	0.3424
20-019	20-019-WR-2	324000	34020	0.000	428.2296	464.2266	0.1547	0.1427
20-023	20-023-WR-2	800	3150	0.000	0.1048	0.1127	0.0038	0.0035
20-023	20-023-WR-3	350	1620	0.000	0.0417	0.0573	0.0019	0.0014
20-023	20-023-WR-1	5675	53100	0.000	0.4209	0.5060	0.0169	0.0140
20-023	20-023-WR-4	2980	10125	0.000	0.0975	0.1775	0.0178	0.0098
20-023	20-023-WR-5	4400	27000	0.000	0.2645	0.3544	0.0118	0.0088
20-023	20-023-GW-1	0	0	0.002	0.4000	0.5000	0.0000	0.0000
20-023	20-023-GW-2	0	0	0.001	0.0238	0.0256	0.0000	0.0000
20-025	20-025-WR-2	7650	25200	0.000	19.8589	21.5940	0.7198	0.6620
20-025	20-025-WR-3	16500	40500	0.000	28.3599	30.7054	0.3071	0.2836
20-025	20-025-WR-5	14000	23400	0.000	39.3073	42.8803	0.4288	0.3931
20-025	20-025-TP-1	4800	32000	0.000	21.3839	23.2381	0.7746	0.7128
20-027	20-027-WR-2	650	1575	0.000	3.0839	3.3380	0.1113	0.1028
20-027	20-027-WR-1	2250	4770	0.000	3.7680	4.0876	0.0409	0.0377
20-062	20-062-WR-3	5000	10000	0.000	0.0775	0.1007	0.0034	0.0026
20-062	20-062-WR-1	1440	24950	0.000	1.5235	1.5512	0.1551	0.1524
20-062	20-062-WR-2	16700	45990	0.000	40.2163	44.0657	0.4407	0.4022
20-062	20-062-TP-1	35800	130500	0.000	32.6838	35.6620	1.1887	1.0895
20-062	20-062-TP-2	57200	0	0.000	96.6535	105.8838	0.0000	0.0000
20-062	20-062-SL-1	1750	23400	0.000	2.2766	2.4109	0.2411	0.2277
20-065	20-065-WR-2	8	63	0.000	0.0002	0.0004	0.0001	0.0001
20-065	20-065-WR-1	14015	37917	0.000	0.3209	0.4392	0.0044	0.0032
20-065	20-065-GW-1	0	0	0.011	0.2000	0.2000	0.0000	0.0000
20-110	20-110-TP-2	280	1260	0.000	5.6482	5.6976	0.5698	0.5648
20-110	20-110-WR-1	61000	256500	0.000	111.8267	113.1338	3.7711	3.7276
20-111	20-111-WR-1	98000	121500	0.000	15.8719	16.9852	0.5662	0.5291
20-111	20-111-WR-2	8300	21690	0.000	4.8426	5.2669	0.1756	0.1614
20-175	20-175-WR-1	15000	40500	0.000	6.5892	7.0693	0.0707	0.0659
20-175	20-175-TP-1	2500	90000	0.000	1.2434	1.3338	0.1334	0.1243
20-180	20-180-WR-1	6700	32220	0.000	0.1593	0.1756	0.0059	0.0053
20-180	20-180-TP-1	5600	7650	0.000	0.2711	0.2993	0.0010	0.0009
20-186	20-186-WR-1	13800	38655	0.000	6.0719	6.5171	0.0652	0.0607
20-186	20-186-WR-4	12000	38925	0.000	8.4227	8.9640	0.0896	0.0842
20-186	20-186-SP-1	235	28035	0.000	0.0669	0.0685	0.0685	0.0669
20-186	20-186-GW-1	0	0	0.111	1.8000	1.9000	0.0000	0.0000
20-191	20-191-WR1X	700	1260	0.000	0.2017	0.2195	0.0073	0.0067
20-194	20-194-WR-1	2300	7157	0.000	1.0690	1.1264	0.0113	0.0107

WASTE CHARACTERISTICS SCORE WORKSHEET

PA NUMBER	SAMPLE NUMBER	WASTE VOLUME (CU. YD.)	UNCOV WASTE AREA (SQ. FT.)	ADIT FLOW (CFS)	GRND W. WASTE CHAR. SCORE	SURF W. WASTE CHAR. SCORE	AIR WASTE CHAR. SCORE	DIR. CONT. WASTE CHAR. SCORE
20-194	20-194-SW-1	0	0	0.001	0.0198	0.0206	0.0000	0.0000
20-209	20-209-WR-2	1300	5850	0.000	2.3998	2.5046	0.0250	0.0240
20-209	20-209-TP-1	10550	48600	0.000	47.4269	47.9177	0.4792	0.4743
20-209	20-209-TP-2	0	0	0.000	0.0000	0.0000	0.0000	0.0000
20-209	20-209-WR-1	7100	37800	0.000	7.4361	7.6438	0.2548	0.2479
20-209	20-209-SW-1	0	0	0.073	72.7000	73.2000	0.0000	0.0000
22-001	22-001-WR-1	130000	105000	0.000	355.5399	390.5160	3.9052	3.5554
22-001	22-001-WR-2	11250	30150	0.000	151.2434	165.9045	1.6590	1.5124
22-001	22-001-WR-3	53000	77500	0.000	83.6222	91.5975	0.3053	0.2787
22-002	22-002-WR-1	3500	9855	0.000	23.9826	26.4221	0.0881	0.0799
22-002	22-002-WR-2	18400	0	0.000	0.0032	0.0829	0.0000	0.0000
22-002	22-002-TP-2	148	4095	0.000	0.0002	0.0023	0.0002	0.0000
22-002	22-002-TP-1	116500	104205	0.000	15.8893	23.9666	0.2397	0.1589
22-003	22-003-WR-1	58410	75690	0.000	158.9913	174.0317	0.5801	0.5300
22-003	22-003-WR-2	12140	30690	0.000	0.7305	0.7917	0.0079	0.0073
22-003	22-003-SW-1	0	0	0.064	6.9000	8.1000	0.0000	0.0000
22-004	22-004-TP-1	500000	1110000	0.000	2504.1369	2723.6094	90.7870	83.4712
22-004	22-004-TP-2	200000	0	0.000	1614.8703	1769.6622	0.0000	0.0000
22-005	22-005-TP-1	10	210	0.000	0.0581	0.0583	0.0058	0.0058
22-005	22-005-WR-1	27000	87300	0.000	119.2990	130.4309	1.3043	1.1930
22-005	22-005-WR-2	2200	8100	0.000	4.6584	5.1053	0.0511	0.0466
22-005	22-005-WR-3	120	1080	0.000	0.6927	0.7589	0.0759	0.0693
22-005	22-005-TP-2	10000	128000	0.000	15.5402	15.5559	1.5556	1.5540
22-007	22-007-TP-1	71200	76680	0.000	433.5456	452.1384	1.5071	1.4452
22-007	22-007-TP-2	15000	36000	0.000	147.7293	152.5642	1.5256	1.4773
22-007	22-007-WR-1	30550	61650	0.000	123.8552	129.6815	0.4323	0.4129
22-007	22-007-WR-2	5450	11070	0.000	21.1979	22.4178	0.7473	0.7066
22-007	22-007-GW-1	0	0	0.044	6.8000	6.9000	0.0000	0.0000
22-007	22-007-GW-2	0	0	0.013	0.7000	0.8000	0.0000	0.0000
22-008	22-008-WR-1	13266	44100	0.000	218.5230	222.3046	2.2230	2.1852
22-008	22-008-WR-2	18200	39600	0.000	129.4845	140.8083	1.4081	1.2948
22-008	22-008-TP-1	1800	8100	0.000	5.8568	6.1912	0.0619	0.0586
22-008	22-008-TP-2	1600	10800	0.000	7.3425	7.7308	0.7731	0.7342
22-008	22-008-TP-3	800	0	0.000	2.8858	3.0412	0.0000	0.0000
22-008	22-008-GW-1	0	0	0.016	145.6000	153.2000	0.0000	0.0000
22-009	22-009-TP-1	36545	121500	0.000	183.7141	189.2432	6.3081	6.1238
22-009	22-009-TP-2	358500	387000	0.000	2118.1887	2204.1426	7.3471	7.0606
22-009	22-009-TP-3	97455	121500	0.000	164.8064	172.3518	5.7451	5.4935
22-009	22-009-WR-1	213000	207000	0.000	518.5804	557.9142	5.5791	5.1858
22-009	22-009-WR-2	870	8370	0.000	1.1015	1.1828	0.0394	0.0367
22-027	22-027-WR-1	23000	21330	0.000	507.2783	549.0765	5.4908	5.0728
22-029	22-029-WR-1	72100	100350	0.000	23.2605	25.4072	0.8469	0.7754
22-032	22-032-WR-1	148	618	0.000	0.0109	0.0122	0.0001	0.0001
22-032	22-032-WR-2	4000	10620	0.000	1.0156	1.1284	0.0376	0.0339
22-036	22-036-WR-1	868	6989	0.000	3.7410	4.1060	0.1369	0.1247
22-036	22-036-WR-2	867	6988	0.000	0.7343	0.8101	0.0270	0.0245
22-036	22-036-TP-1	9500	57000	0.000	0.3619	0.3948	0.0132	0.0121
22-036	22-036-TP-2	9500	28500	0.000	18.6778	19.7687	0.6590	0.6226
22-039	22-074-PL12X	22000	118980	0.000	0.0060	0.0621	0.0062	0.0006
22-046	22-046-WR-1	3334	18000	0.000	19.3462	19.6459	0.6549	0.6449
22-046	22-046-WR-2	5466	26820	0.000	16.1295	16.8705	0.5624	0.5376
22-046	22-046-WR-3	5100	21600	0.000	18.3035	18.8847	0.6295	0.6101
22-046	22-046-WR-4	3800	13500	0.000	79.4194	80.3762	2.6792	2.6473
22-049	22-049-WR-1	430	1530	0.000	1.2666	1.3940	0.0465	0.0422
22-049	22-049-WR-2	5130	7085	0.000	0.1641	0.1817	0.0006	0.0005
22-054	22-046-WR-5	1700	18000	0.000	3.3923	3.4920	0.3492	0.3392

WASTE CHARACTERISTICS SCORE WORKSHEET

PA		WASTE	UNCOV		GRND W.	SURF W.	AIR	DIR. CONT.
NUMBER	SAMPLE	VOLUME	WASTE	ADIT	WASTE	WASTE	WASTE	WASTE
	NUMBER	(CU. YD.)	AREA	FLOW	CHAR.	CHAR	CHAR.	CHAR.
			(SQ. FT.)	(CFS)	SCORE	SCORE	SCORE	SCORE
22-054	22-046-SW-7	0	0	0.045	2.2000	2.3000	0.0000	0.0000
22-072	22-072-WR-1	6130	19327	0.000	6.8834	7.4063	0.2469	0.2294
22-072	22-072-TP-4	0	0	0.000	0.0000	0.0000	0.0000	0.0000
22-072	22-072-TP-1	8894	84038	0.000	100.0954	104.4058	3.4802	3.3365
22-072	22-072-TP-2	5928	0	0.000	1.0668	1.1249	0.0000	0.0000
22-072	22-072-TP-3	5928	84037	0.000	2.1822	2.2137	0.0738	0.0727
22-073	22-073-WR-5	52857	28369	0.000	308.1753	319.1783	1.0639	1.0273
22-073	22-073-WR-1	4675	42075	0.000	9.6504	9.9713	0.3324	0.3217
22-073	22-073-WR-2	4675	42075	0.000	2.6680	2.8793	0.0960	0.0889
22-073	22-073-WR-3	13000	62010	0.000	38.6917	42.2771	0.4228	0.3869
22-073	22-073-WR-4	10700	59490	0.000	70.9617	74.3588	0.7436	0.7096
22-073	22-073-WR-6	122428	113477	0.000	45.2623	46.6767	0.4668	0.4526
22-073	22-073-WR-7	105715	56738	0.000	53.7000	56.5550	0.0566	0.0537
22-073	22-073-SW-4	0	0	0.056	350.2000	368.7000	0.0000	0.0000
22-074	22-074-WR-1	11465	47187	0.000	67.1823	68.2906	0.6829	0.6718
22-074	22-074-WR-2	11465	47187	0.000	259.9880	263.7474	2.6375	2.5999
22-074	22-074-SW-4	0	0	0.001	5.1000	5.2000	0.0000	0.0000
22-075	22-075-WR-2	2190	25200	0.000	20.5951	21.2037	2.1204	2.0595
22-075	22-075-WR-1	90000	96300	0.000	48.5541	52.5643	0.1752	0.1618
22-075	22-075-TP-1	11000	149400	0.000	26.2136	27.6484	2.7648	2.6214
22-075	22-075-GW-1	0	0	0.011	0.4000	0.4000	0.0000	0.0000
22-077	22-077-WR-1	28800	37485	0.000	1.1912	1.3857	0.0139	0.0119
22-077	22-077-TP-1	2400	26460	0.000	4.3626	4.5824	0.4582	0.4363
22-077	22-077-TP-2	4800	0	0.000	1.6965	1.8550	0.0000	0.0000
22-102	22-102-WR-1	13335	43484	0.000	6.7041	7.4098	0.0741	0.0670
22-102	22-102-WR-2	12665	43216	0.000	77.0324	84.6259	0.8463	0.7703
22-102	22-102-GW-1	0	0	0.000	0.0000	0.0000	0.0000	0.0000
22-102	22-102-GW-2	0	0	0.013	0.2000	0.2000	0.0000	0.0000
22-111	22-111-WR-1	80000	181800	0.000	42.9689	45.1580	1.5053	1.4323
22-244	22-244-TA1	3333	22500	0.000	40.7083	43.6043	1.4535	1.3569
22-244	22-244-TA2	3334	0	0.000	69.6652	74.0991	0.0000	0.0000
22-244	22-244-WR-1	30	1800	0.000	0.4935	0.5400	0.1800	0.1645
22-244	22-244-WR-3	2460	15120	0.000	9.9559	10.7270	1.0727	0.9956
22-244	22-244-TA3	3333	0	0.000	58.2472	61.4657	0.0000	0.0000
22-245	22-245-WR-1	240	1620	0.000	0.6101	0.6488	0.0649	0.0610
22-245	22-245-WR-2	370	1260	0.000	3.1500	3.3137	0.1105	0.1050
22-284	22-284-WR-1	5170	13422	0.000	71.1669	78.2854	2.6095	2.3722
22-284	22-284-WR-2	2150	7152	0.000	1.2915	1.4208	0.0142	0.0129
22-296	22-296-TP-1	15333	47916	0.000	1.7656	1.8849	0.0188	0.0177
22-296	22-296-TP-2	7667	47916	0.000	7.4603	7.6696	0.2557	0.2487
22-301	22-301-WR-1	580	1328	0.000	0.1415	0.1548	0.0052	0.0047
22-336	22-336-WR-1	14650	56430	0.000	4.8498	4.9246	0.0492	0.0485
22-336	22-336-WR-2	14000	56686	0.000	4.6086	4.9502	0.0495	0.0461
22-336	22-336-WR-3	3800	22226	0.000	0.0894	0.1012	0.0034	0.0030
22-336	22-336-SW-3	0	0	0.016	0.9000	1.4000	0.0000	0.0000
22-358	22-358-WR-3	50	450	0.000	1.0629	1.1591	0.0386	0.0354
22-358	22-358-WR-1	0	0	0.000	0.0000	0.0000	0.0000	0.0000
22-358	22-358-WR-2	37	540	0.000	0.2881	0.3165	0.0105	0.0096
23-001	BLOCK P MINE	125000	180000	0.000	1044.0000	1145.7958	11.4580	10.4400
23-022	23-022-WR2	350	6885	0.000	0.1690	0.1861	0.0062	0.0056
23-022	23-022-WR4	390	2700	0.000	3.5561	3.9061	0.1302	0.1185
23-027	23-027-TP-1	450	12150	0.000	0.0113	0.0113	0.0038	0.0038
23-035	23-035-TP1B	450	0	0.000	3.7979	4.0919	0.0000	0.0000
23-035	23-035-TP1A	300	8100	0.000	5.2790	5.7848	0.1928	0.1760
23-042	23-042-WR1	4500	11925	0.000	2.2722	2.4545	0.0818	0.0757
23-042	23-042-SW-1	0	0	0.017	0.7000	0.7000	0.0000	0.0000

WASTE CHARACTERISTICS SCORE WORKSHEET

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23-045	23-045-WR-2	2320	14085	0.000	8.4438	9.2768	0.9277	0.8444
23-045	23-045-WR-4	17400	34425	0.000	142.5406	156.5884	1.5659	1.4254
23-046	23-046-WR-2	50000	109800	0.000	758.9495	833.6969	27.7899	25.2983
23-056	23-056-WR1	10500	21000	0.000	107.9042	119.3794	1.1938	1.0790
23-056	23-056-GW-1	0	0	0.250	8.9000	10.1000	0.0000	0.0000
23-058	23-058-WR1	975	4400	0.000	6.7342	7.4225	0.2474	0.2245
23-058	23-058-SW-3	0	0	0.000	0.0000	0.0000	0.0000	0.0000
23-059	23-059-WR1	2900	11250	0.000	16.6014	18.4305	1.8431	1.6601
23-059	23-059-WR2	1900	17100	0.000	15.9289	17.5403	1.7540	1.5929
23-059	23-059-SW-2	0	0	0.025	7.3000	8.2000	0.0000	0.0000
23-079	23-079-TP-1	325	1480	0.000	0.0377	0.1230	0.0041	0.0013
23-079	23-079-TP-2	325	1480	0.000	0.0316	0.1167	0.0039	0.0011
25-005	25-005-WR-1	2100	28800	0.000	4.1835	4.4171	0.4417	0.4184
25-005	25-005-WR-2	940	4446	0.000	2.5607	2.6604	0.0887	0.0854
25-005	25-005-GW-1	0	0	0.004	0.2000	0.2000	0.0000	0.0000
25-007	25-007-WR-1	4900	19450	0.000	30.6294	31.2612	1.0420	1.0210
25-007	25-007-WR-2	2000	46665	0.000	6.0817	6.3079	0.6308	0.6082
25-007	25-007-GW-1	0	0	0.064	8.2000	9.0000	0.0000	0.0000
25-008	25-008-WR-1	5800	5600	0.000	93.6241	96.6720	0.3222	0.3121
25-010	25-010-WR-1	8200	21900	0.000	0.4266	0.4971	0.0166	0.0142
25-010	25-010-TP-1	730	0	0.000	0.1601	0.2021	0.0000	0.0000
25-019	25-019-WR-2	600	3600	0.000	6.8297	6.9538	0.2318	0.2277
25-019	25-019-WR-1	3280	17675	0.000	19.0584	19.8518	0.6617	0.6353
25-019	25-019-WR-3	2055	13400	0.000	12.9244	13.5287	1.3529	1.2924
25-019	25-019-WR-4	6550	25650	0.000	35.3214	37.6402	1.2547	1.1774
25-020	25-020-WR-2	1800	9000	0.000	0.0532	0.0577	0.0006	0.0005
25-020	25-020-WR-1	19000	18000	0.000	2.9001	3.0296	0.0303	0.0290
25-020	25-020-SW-5	0	0	0.004	0.1000	0.1000	0.0000	0.0000
25-030	25-030-TP-1	13500	12500	0.000	56.6878	59.0092	0.5901	0.5669
25-040	25-040-WR-1	25	1080	0.000	0.0006	0.0006	0.0006	0.0006
25-061	25-061-WR-1	23100	72450	0.000	0.3967	0.4132	0.0041	0.0040
25-061	25-061-TP-1	39150	221850	0.000	3.5523	3.9254	0.1308	0.1184
25-061	25-061-TP-2	25800	0	0.000	0.6478	0.7158	0.0000	0.0000
25-067	25-067-TP1-A	90909	149760	0.000	22.4144	23.0839	0.7695	0.7471
25-067	25-067-TP1-B	109091	0	0.000	50.3086	52.1557	0.0000	0.0000
25-067	25-067-TP2-A	110000	83160	0.000	76.8595	80.1665	0.0802	0.0769
25-067	25-067-TP2-B	66000	0	0.000	28.3908	29.2170	0.0000	0.0000
25-067	25-067-TP-3	2500	13500	0.000	5.9184	6.1998	0.6200	0.5918
25-073	25-073-WR-1	10100	12141	0.000	0.0044	0.0082	0.0001	0.0000
25-102	25-102-WR-1	6400	29820	0.000	52.3708	57.1533	1.9051	1.7457
25-102	25-102-WR-2	8700	38840	0.000	49.4263	53.6441	1.7881	1.6475
25-103	25-103-WR-1	2000	7695	0.000	0.1041	0.1185	0.0012	0.0010
25-103	25-103-WR-2	1500	5535	0.000	2.0942	2.3043	0.0230	0.0209
25-103	25-103-WR-3	1200	7740	0.000	0.5243	0.5970	0.0060	0.0052
25-103	25-103-SW-2	0	0	0.111	2.0000	2.1000	0.0000	0.0000
25-115	25-115-TP-1	1500	17200	0.000	11.4914	12.6545	1.2655	1.1491
25-116	25-116-WR-2	300	2790	0.000	0.0005	0.0005	0.0000	0.0000
25-116	25-116-WR-1	1000	9900	0.000	0.6197	0.6914	0.0069	0.0062
25-116	25-116-WR-4	1100	16245	0.000	1.7245	1.8977	0.1898	0.1724
25-167	25-167-TP-1	40000	40950	0.000	0.2516	0.3117	0.0010	0.0008
25-167	25-167-TP-2	17030	11588	0.000	0.0232	0.0276	0.0003	0.0002
25-167	25-167-WR-1	18800	37665	0.000	0.0157	0.0217	0.0002	0.0002
25-172	25-172-TP-1	420	0	0.000	0.0283	0.0310	0.0000	0.0000
25-172	25-172-TP-2	202000	225990	0.000	127.4656	140.3311	1.4033	1.2747
25-172	25-172-TP-3	133400	140940	0.000	194.8688	214.4866	2.1449	1.9487
25-175	25-175-TP-1	10000	436600	0.000	138.8362	153.6713	15.3671	13.8836

WASTE CHARACTERISTICS SCORE WORKSHEET

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25-175	25-175-TP-2	2500	0	0.000	7.2592	8.0066	0.0000	0.0000
25-175	25-175-TP-3	2500	0	0.000	10.6188	11.7319	0.0000	0.0000
25-179	25-179-WR-1	850	2700	0.000	9.5887	10.2430	0.3414	0.3196
25-179	25-179-TP-1	16233	54450	0.000	14.3615	15.9294	0.1593	0.1436
25-179	25-179-TP-2	26867	0	0.000	11.4282	12.6610	0.0000	0.0000
25-179	25-179-TP-3	0	0	0.000	0.0000	0.0000	0.0000	0.0000
25-179	25-179-TP-4	5600	28314	0.000	7.6839	8.4984	0.2833	0.2561
25-197	25-197-TP-1	87500	67950	0.000	1.1072	1.2184	0.0041	0.0037
25-197	25-197-TP-2	87500	0	0.000	6.2168	6.8332	0.0000	0.0000
25-208	25-208-TP-1	3700	6000	0.000	7.6865	8.4913	0.0283	0.0256
25-208	25-208-WR-1	3860	13900	0.000	2.4454	2.7068	0.0902	0.0815
25-208	25-208-WR-2	8500	39700	0.000	4.7755	5.3082	0.1769	0.1592
25-208	25-208-WR-3	10000	50000	0.000	3.3997	3.7608	0.0376	0.0340
25-208	25-208-SW-3	0	0	0.047	1.7000	1.7000	0.0000	0.0000
25-212	25-212-TP-1	2750	21420	0.000	0.1901	0.2163	0.0216	0.0190
25-226	25-226-WR-1	14000	34830	0.000	0.0013	0.0015	0.0000	0.0000
25-226	25-226-TP-1	1700	2000	0.000	0.0000	0.0000	0.0000	0.0000
25-227	25-227-WR-1	25000	45540	0.000	1.1671	1.4281	0.0143	0.0117
25-227	25-227-SW-3	0	0	0.001	0.0224	0.0228	0.0000	0.0000
25-280	25-280-WR-3	800	2430	0.000	51.0869	52.6095	1.7536	1.7029
25-280	25-280-WR-2	800	2430	0.000	3.9911	4.2330	0.1411	0.1330
25-314	25-365-TP-3	0	0	0.000	0.0000	0.0000	0.0000	0.0000
25-317	25-317-TP-1	1600	22860	0.000	2.9320	3.1995	0.3199	0.2932
25-317	25-317-TP-2	400	0	0.000	1.2502	1.3606	0.0000	0.0000
25-322	25-322-TP1A-A	218	3788	0.000	0.4434	0.4910	0.0491	0.0443
25-322	25-322-TP1A-B	218	0	0.000	0.0251	0.0280	0.0000	0.0000
25-322	25-322-TP1A-C	218	0	0.000	0.0322	0.0373	0.0000	0.0000
25-322	25-322-TP1A-D	218	0	0.000	0.0273	0.0350	0.0000	0.0000
25-322	25-322-TP1A-E	218	0	0.000	0.0051	0.0060	0.0000	0.0000
25-322	25-322-TP1B-A	218	3788	0.000	0.8748	0.9633	0.0963	0.0875
25-322	25-322-TP1B-B	218	0	0.000	0.0173	0.0203	0.0000	0.0000
25-322	25-322-TP1B-C	218	0	0.000	0.0391	0.0449	0.0000	0.0000
25-322	25-322-TP1B-D	218	0	0.000	0.0190	0.0223	0.0000	0.0000
25-322	25-322-TP1B-E	217	0	0.000	0.0104	0.0126	0.0000	0.0000
25-322	25-322-TP1C-A	217	3788	0.000	0.4282	0.4867	0.0487	0.0428
25-322	25-322-TP1C-B	217	0	0.000	0.0392	0.0446	0.0000	0.0000
25-322	25-322-TP1C-C	217	0	0.000	0.0371	0.0490	0.0000	0.0000
25-322	25-322-TP1C-D	217	0	0.000	0.0270	0.0312	0.0000	0.0000
25-322	25-322-TP1C-E	217	0	0.000	0.0048	0.0059	0.0000	0.0000
25-322	25-322-TP1D-A	217	3787	0.000	0.5044	0.5617	0.0562	0.0504
25-322	25-322-TP1D-B	217	0	0.000	0.0070	0.0079	0.0000	0.0000
25-322	25-322-TP1D-C	217	0	0.000	0.0010	0.0010	0.0000	0.0000
25-322	25-322-TP1E-A	217	3787	0.000	0.2806	0.3089	0.0309	0.0281
25-322	25-322-TP1E-B	217	0	0.000	0.0248	0.0291	0.0000	0.0000
25-322	25-322-TP1E-C	217	0	0.000	0.0105	0.0249	0.0000	0.0000
25-322	25-322-TP1E-D	217	0	0.000	0.0171	0.0210	0.0000	0.0000
25-322	25-322-TP1F-A	217	3787	0.000	0.4405	0.4868	0.0487	0.0441
25-339	25-339-TP-1	300	4950	0.000	0.3788	0.4161	0.0139	0.0126
25-339	25-339-WR-1	6050	20970	0.000	19.0463	20.9667	0.6989	0.6349
25-339	25-339-WR-2	4300	18000	0.000	0.9658	1.0659	0.0355	0.0322
25-339	25-339-LP-1	9700	27790	0.000	1.4033	1.5556	0.0519	0.0468
25-365	25-365-TP-3	53750	36333	0.000	1.5152	1.8035	0.0060	0.0051
25-365	25-365-TP-1	430000	290667	0.000	94.8684	126.1675	0.4206	0.3162
25-365	25-365-TP-2	161250	109000	0.000	24.7318	31.3470	0.3135	0.2473
25-365	25-365-TP-4	7000	106200	0.000	0.8587	0.9944	0.3315	0.2862
25-365	25-365-TP-5	20800	22500	0.000	8.6380	11.4622	0.1146	0.0864

WASTE CHARACTERISTICS SCORE WORKSHEET

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25-365	25-365-TP-6	0	0	0.000	0.0000	0.0000	0.0000	0.0000
27-005	27-005-TP-1	5000	45000	0.000	144.4267	157.9958	5.2665	4.8142
27-005	27-005-WR-1	3990	39060	0.000	187.4362	205.3670	6.8456	6.2479
27-006	27-006-TP-1	4540	3500	0.000	32.5637	35.7192	0.1191	0.1085
27-055	27-055-WR-1	200	680	0.000	0.0003	0.0004	0.0000	0.0000
29-006	29-006-TP-1	1010	4545	0.000	0.1175	0.1426	0.0014	0.0012
29-006	29-006-WR-1	2290	6075	0.000	0.1813	0.2054	0.0021	0.0018
29-008	29-008-WR-1	16470	14670	0.000	2.3690	2.6802	0.0268	0.0237
29-008	29-008-WR-2	12880	42030	0.000	3.7617	4.0011	0.0400	0.0376
29-008	29-008-TP-1	12700	95670	0.000	6.7993	6.9683	0.0697	0.0680
29-008	29-008-TP-2	35250	0	0.000	22.6615	24.3182	0.0000	0.0000
29-008	29-008-SW-3	0	0	0.011	0.2000	0.2000	0.0000	0.0000
29-010	29-010-WR-1	8500	17865	0.000	1.6682	1.8788	0.0626	0.0556
29-010	29-010-TP-1	3000	7000	0.000	1.5017	1.6781	0.0056	0.0050
29-010	29-010-SW-1	0	0	0.001	0.0120	0.0122	0.0000	0.0000
29-013	29-013-TP-1	24678	52135	0.000	31.2713	34.4233	0.3442	0.3127
29-013	29-013-TP-2	31822	62165	0.000	148.4111	163.5843	0.5453	0.4947
29-013	29-013-WR-1	138770	115740	0.000	62.2227	68.5281	0.6853	0.6222
29-033	29-033-TP-1	35182	174240	0.000	0.3801	0.4144	0.0138	0.0127
29-033	29-033-TP-2	29318	0	0.000	0.5408	0.5956	0.0000	0.0000
29-033	29-033-WR-1	1000	2520	0.000	0.1401	0.1544	0.0015	0.0014
29-033	29-033-WR-2	18000	39600	0.000	0.0294	0.0396	0.0004	0.0003
29-033	29-033-SS-1	0	0	0.000	0.0000	0.0000	0.0000	0.0000
29-033	29-033-SS-2	0	0	0.000	0.0000	0.0000	0.0000	0.0000
29-033	29-033-SW-3	0	0	0.027	0.8000	1.3000	0.0000	0.0000
29-034	29-034-TP-1	30545	75600	0.000	2.4015	2.7416	0.0091	0.0080
29-034	29-034-TP-2	17455	0	0.000	3.2295	3.6078	0.0000	0.0000
29-034	29-034-TP-3	4400	7560	0.000	0.4169	0.4713	0.0016	0.0014
29-034	29-034-TP-4	7200	10440	0.000	0.9731	1.1151	0.0372	0.0324
29-034	29-034-TP-5	0	0	0.000	0.0000	0.0000	0.0000	0.0000
29-034	29-034-WR-1	16000	50400	0.000	1.2861	1.5098	0.0151	0.0129
29-034	29-034-WR-2	9020	57168	0.000	0.4117	0.4915	0.0164	0.0137
29-034	29-034-WR-3	1500	17820	0.000	1.8736	2.0685	0.2069	0.1874
29-034	29-034-SW-3	0	0	0.022	0.6000	0.6000	0.0000	0.0000
29-038	29-038-WR-1	3020	6310	0.000	4.5887	5.0710	0.0169	0.0153
29-038	29-038-WR-2	9800	27235	0.000	0.8741	1.0021	0.0334	0.0291
29-038	29-038-TP-1	6463	16515	0.000	1.1553	1.2734	0.0424	0.0385
29-038	29-038-TP-2	7012	0	0.000	1.7326	1.9137	0.0000	0.0000
29-038	29-038-SW-3	0	0	0.020	1.4000	1.6000	0.0000	0.0000
29-061	29-061-TP-1	8775	47817	0.000	38.4809	41.3154	1.3772	1.2827
29-061	29-061-TP-2	2925	0	0.000	35.9915	39.0883	0.0000	0.0000
29-061	29-061-WR-3	1350	8874	0.000	53.2681	57.4681	0.5747	0.5327
29-061	29-061-WR-1	310	6651	0.000	2.7418	2.9361	0.0979	0.0914
29-061	29-061-WR-2	13525	24417	0.000	371.0155	399.1717	3.9917	3.7102
29-073	29-073-WR-1	203	1485	0.000	0.0283	0.0321	0.0032	0.0028
29-073	29-073-WR-2	890	9090	0.000	0.6035	0.6623	0.0221	0.0201
29-073	29-073-TP-1A	24956	89298	0.000	52.0846	54.6764	0.5468	0.5208
29-073	29-073-TP-1B	31194	89298	0.000	381.6130	400.8849	1.3363	1.2720
29-078	29-078-WR-1	2579	6164	0.000	1.2044	1.3295	0.0133	0.0120
29-078	29-078-WR-2	230	4938	0.000	0.0553	0.0611	0.0061	0.0055
29-078	29-078-WR-3	3200	9090	0.000	5.4372	5.9973	0.0200	0.0181
29-079	29-079-WR-1	25000	67500	0.000	0.7764	1.0130	0.0101	0.0078
29-079	29-079-TP-1	2738	15233	0.000	0.0507	0.0769	0.0077	0.0051
29-079	29-079-TP-2	1200	0	0.000	0.0728	0.0990	0.0000	0.0000
29-079	29-079-TP-3	512	0	0.000	0.0025	0.0026	0.0000	0.0000
29-079	29-079-SW-3	0	0	0.002	0.1000	0.1000	0.0000	0.0000

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29-082	29-082-WR-1	1000	2700	0.000	0.2170	0.2257	0.0023	0.0022
29-082	29-082-TP-1	270000	522720	0.000	26.2249	28.9193	0.2892	0.2622
29-082	29-082-TP-2	120000	0	0.000	63.1848	67.1529	0.0000	0.0000
29-082	29-082-TP-3	15500	139500	0.000	5.7012	5.9725	0.5972	0.5701
29-082	29-082-GW-1	0	0	0.870	26.0000	28.0000	0.0000	0.0000
29-083	29-083-WR-1	14000	31500	0.000	0.6031	0.6773	0.0068	0.0060
29-083	29-083-WR-2	28000	42300	0.000	2.4083	3.1995	0.0320	0.0241
29-083	29-083-SW-3	0	0	0.111	1.8000	1.8000	0.0000	0.0000
29-102	29-102-WR-1	5000	27000	0.000	0.5844	0.7100	0.0237	0.0195
29-102	29-102-WR-2	4080	13838	0.000	1.8393	1.9445	0.0648	0.0613
29-103	29-103-WR-1	9900	8100	0.000	0.3048	0.3360	0.0011	0.0010
29-103	29-103-TP-1	900	0	0.000	0.1699	0.1866	0.0000	0.0000
29-103	29-103-SW-2	0	0	0.001	0.0168	0.0170	0.0000	0.0000
29-105	29-105-WR-1	1500	4950	0.000	0.0466	0.0559	0.0006	0.0005
29-105	29-105-WR-2	2425	9547	0.000	0.2984	0.3451	0.0035	0.0030
29-105	29-105-WR-3	3035	9450	0.000	0.9446	1.1030	0.0037	0.0031
29-106	29-106-WR-1	350	2700	0.000	0.0229	0.0274	0.0009	0.0008
29-118	29-118-WR-1	5000	10800	0.000	1.2300	1.2816	0.0427	0.0410
29-118	29-118-WR-2	185000	405000	0.000	3.1420	3.7216	0.0372	0.0314
29-118	29-118-SW-3	0	0	0.600	17.4000	17.9000	0.0000	0.0000
29-121	29-121-WR-1	7100	52200	0.000	0.3431	0.3960	0.0132	0.0114
29-121	29-121-TP-1	1500	13500	0.000	2.8589	3.1448	0.3145	0.2859
29-121	29-121-SW-3	0	0	0.030	0.6000	0.6000	0.0000	0.0000
29-179	29-179-TP-1	68000	127800	0.000	47.0230	52.4391	1.7480	1.5674
29-179	29-179-TP-2	29000	78300	0.000	4.1648	5.6677	0.0567	0.0416
29-179	29-179-TP-3	10000	67500	0.000	13.5008	15.1337	0.1513	0.1350
29-179	29-179-TP-4	0	0	0.000	0.0000	0.0000	0.0000	0.0000
29-179	29-179-TP-5	25000	0	0.000	39.3209	43.4317	0.0000	0.0000
29-179	29-179-WR-2	1500	4950	0.000	0.0015	0.0582	0.0006	0.0000
29-179	29-179-WR-1	32500	37890	0.000	120.7668	133.0080	0.4434	0.4026
29-282	29-282-WR-1	9350	10467	0.000	1.9776	2.1683	0.0723	0.0659
29-282	29-282-WR-2	8880	6120	0.000	3.4095	3.7301	0.0124	0.0114
29-285	29-285-WR-1	75	720	0.000	0.0069	0.0075	0.0003	0.0002
29-285	29-285-WR-2	330	5740	0.000	1.6381	1.8109	0.0604	0.0546
29-293	29-293-WR-1	400	2025	0.000	0.8761	0.9697	0.0323	0.0292
29-293	29-293-WR-2	1300	5184	0.000	0.5594	0.5970	0.0060	0.0056
29-293	29-293-SW-1	0	0	0.001	0.0230	0.0244	0.0000	0.0000
29-354	29-354-WR-1	609	3213	0.000	0.2003	0.2294	0.0076	0.0067
29-354	29-354-WR-2	13262	24228	0.000	4.3930	4.9466	0.0495	0.0439
29-373	29-373-WR-1	4200	16938	0.000	15.7761	16.9218	0.5641	0.5259
29-373	29-373-WR-2	1760	4320	0.000	0.0300	0.0399	0.0004	0.0003
29-373	29-373-TP-1	6056	0	0.000	55.5050	59.2972	0.0000	0.0000
29-373	29-373-TP-2	6055	0	0.000	30.3304	32.4193	0.0000	0.0000
29-383	29-383-WR-1	18500	82800	0.000	6.7859	7.5616	0.0756	0.0679
29-383	29-383-WR-2	100	2700	0.000	0.0020	0.0021	0.0002	0.0002
29-383	29-383-SW-3	0	0	0.104	5.1000	5.4000	0.0000	0.0000
29-383	29-383-SW-5	0	0	0.050	8.7000	9.0000	0.0000	0.0000
29-394	29-394-WR-1	4600	50400	0.000	8.3140	8.9424	0.2981	0.2771
29-394	29-394-SW-1	0	0	0.001	0.0268	0.0271	0.0000	0.0000
29-399	29-399-TP-1	4580	12060	0.000	1.8350	2.0096	0.0670	0.0612
29-399	29-399-TP-2	600	8730	0.000	0.5378	0.5950	0.0198	0.0179
29-399	29-399-TP-3	600	0	0.000	0.4559	0.5033	0.0000	0.0000
29-399	29-399-WR-1	1030	4230	0.000	0.5337	0.5870	0.0059	0.0053
29-436	29-436-WR-2	6000	15000	0.000	11.2058	12.3802	0.4127	0.3735
29-436	29-436-WR-3	2300	4050	0.000	0.7363	0.8106	0.0081	0.0074
29-436	29-436-WR-1	30012	75630	0.000	0.4781	0.5358	0.0018	0.0016

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29-436	29-436-TP-1	13300	72000	0.000	13.8549	15.2901	0.1529	0.1385
29-436	29-436-SW-3	0	0	0.016	0.6000	0.6000	0.0000	0.0000
29-436	29-436-SW-4	0	0	0.016	0.5000	0.6000	0.0000	0.0000
29-449	29-449-WR-1	2835	26460	0.000	0.2337	0.2615	0.0262	0.0234
29-449	29-449-SW-1	0	0	0.045	0.5000	0.6000	0.0000	0.0000
29-451	29-451-WR-1	150	0	0.000	0.0889	0.0981	0.0000	0.0000
29-451	29-451-WR-2	4200	24300	0.000	31.2190	34.4507	1.1484	1.0406
29-451	29-451-TP-1	3150	12870	0.000	2.2196	2.4519	0.0817	0.0740
29-451	29-451-TP-2	3950	0	0.000	2.2196	2.4634	0.0000	0.0000
29-455	29-455-WR-1	2500	9000	0.000	0.0010	0.0074	0.0001	0.0000
29-455	29-455-WR-2	1350	4050	0.000	0.0472	0.0563	0.0006	0.0005
29-455	29-455-WR-3	2050	0	0.000	0.5114	0.5321	0.0000	0.0000
29-473	29-473-WR-1	1530	23400	0.000	0.3243	0.3573	0.0357	0.0324
29-474	29-474-WR-1	7309	51345	0.000	45.4687	49.7977	1.6599	1.5156
29-474	29-474-WR-2	1290	15930	0.000	2.1480	2.1864	0.2186	0.2148
29-474	29-474-WR-3	2430	20785	0.000	6.8337	7.3102	0.7310	0.6834
29-474	29-474-WR-4	3190	15750	0.000	30.7888	32.6404	1.0880	1.0263
29-476	29-476-WR-1	1170	7415	0.000	0.6307	0.6913	0.0069	0.0063
29-476	29-476-WR-2	630	4752	0.000	1.4761	1.5967	0.0532	0.0492
29-476	29-476-WR-3	4100	15624	0.000	8.5278	9.3863	0.3129	0.2843
30-004	30-004-SL-1	0	0	0.000	0.0000	0.0000	0.0000	0.0000
30-004	30-004-WR-1	10000	28857	0.000	529.6938	582.1639	5.8216	5.2969
30-004	30-004-WR-2	10680	58298	0.000	156.8200	171.9981	1.7200	1.5682
30-007	30-007-WR-1	900	5913	0.000	0.1054	0.1202	0.0040	0.0035
30-007	30-007-WR-2	4600	36828	0.000	0.0007	0.0607	0.0020	0.0000
30-007	30-007-SW-4	0	0	0.004	0.1000	0.1000	0.0000	0.0000
30-017	30-017-WR-1	275	3870	0.000	0.4159	0.4563	0.0456	0.0416
30-019	30-019-WR-1	735	3790	0.000	0.3323	0.3659	0.0122	0.0111
30-067	30-067-WR-1	7470	42390	0.000	0.0483	0.0938	0.0031	0.0016
30-067	30-067-TP-1	25	360	0.000	0.0004	0.0011	0.0001	0.0000
30-067	30-067-GW-1	0	0	0.033	0.6000	0.6000	0.0000	0.0000
30-067	30-067-GW-2	0	0	0.100	1.7000	1.7000	0.0000	0.0000
30-069	30-069-WR-1	2000	12240	0.000	0.0002	0.0114	0.0011	0.0000
30-069	30-069-WR-2	10450	49680	0.000	0.0707	0.0778	0.0008	0.0007
30-078	30-078-WR-1	18	180	0.000	0.0369	0.0406	0.0041	0.0037
30-078	30-078-WR-2	10000	23000	0.000	7.4886	8.2905	0.0829	0.0749
31-001	31-001-WR-1	13000	32400	0.000	8.1103	8.6929	0.0869	0.0811
31-001	31-001-WR-2	2875	20025	0.000	0.3972	0.4407	0.0441	0.0397
31-001	31-001-WR-3	15000	87000	0.000	4.3626	4.9225	0.0492	0.0436
31-001	31-001-SW-1	0	0	0.004	0.9000	0.9000	0.0000	0.0000
31-003	31-003-WR-1	800	2000	0.000	4.3345	4.6868	0.1562	0.1445
31-003	31-003-WR-2	4500	8350	0.000	1.1289	1.1905	0.0040	0.0038
31-003	31-003-GW-1	0	0	0.011	0.2000	0.2000	0.0000	0.0000
31-010	31-010-WR-1	6500	24840	0.000	0.6966	0.7813	0.0260	0.0232
31-010	31-010-TP-1	140	1350	0.000	1.9193	2.0664	0.2066	0.1919
31-010	31-010-TP-2	228	4932	0.000	1.7232	1.8560	0.1856	0.1723
31-010	31-010-GW-1	0	0	0.022	3.8000	3.8000	0.0000	0.0000
31-021	31-021-WR-1	1275	4140	0.000	0.0077	0.0086	0.0001	0.0001
31-021	31-021-GW-1	0	0	0.110	1.7000	1.8000	0.0000	0.0000
31-049	31-049-WR-1	1150	32145	0.000	0.0854	0.0988	0.0099	0.0085
31-049	31-049-TP-1	80	1425	0.000	0.0032	0.0036	0.0012	0.0011
31-067	31-067-WR-1	400	2180	0.000	0.0009	0.0019	0.0001	0.0000
31-072	31-072-WR-1	400	3600	0.000	13.5553	14.7874	0.4929	0.4518
31-072	31-072-WR-2	7370	38880	0.000	35.5330	38.9907	1.2997	1.1844
31-073	31-073-WR-1	3000	17280	0.000	16.9037	18.1793	0.6060	0.5635
31-074	31-074-WR-1	9500	21150	0.000	0.1001	0.1253	0.0042	0.0033

WASTE CHARACTERISTICS SCORE WORKSHEET

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31-074	31-074-GW-1	0	0	0.001	0.0170	0.0175	0.0000	0.0000
31-077	31-077-WR-1	9200	31500	0.000	8.3037	9.2547	0.3085	0.2768
31-077	31-077-GW-1	0	0	0.001	0.0207	0.0211	0.0000	0.0000
31-078	31-078-WR-1	400	0	0.000	0.1447	0.1620	0.0000	0.0000
31-082	31-082-TP-1	16333	308700	0.000	122.7516	134.4681	13.4468	12.2752
31-090	31-090-TP-1	145775	351500	0.000	264.7342	293.7229	2.9372	2.6473
31-090	31-090-TP-2	59075	0	0.000	164.5677	175.1879	0.0000	0.0000
32-005	32-005-WR-1	320000	315000	0.000	219.9936	241.5126	0.8050	0.7333
32-005	32-005-WR-2	1200	9720	0.000	0.8264	0.9098	0.0091	0.0083
32-010	32-010-WR-1	68300	139140	0.000	2.5254	3.0331	0.1011	0.0842
32-011	32-011-WR-1	3700	22320	0.000	10.2425	11.3019	0.3767	0.3414
32-017	32-017-WR-1	5220	19350	0.000	14.6154	16.0911	0.5364	0.4872
32-017	32-017-TP-1	11500	17550	0.000	13.8340	14.1950	0.1419	0.1383
32-017	32-017-WR-4	11500	0	0.000	141.8660	155.9213	0.0000	0.0000
32-033	32-033-WR-1	63600	324000	0.000	0.4496	0.4914	0.0164	0.0150
32-033	32-033-WR-2	2100	18900	0.000	0.1190	0.1305	0.0130	0.0119
32-042	32-042-WR-1	1300	8800	0.000	2.4381	2.6801	0.0268	0.0244
32-042	32-042-GW-1	0	0	0.003	0.1000	0.1000	0.0000	0.0000
32-048	32-048-WR-1	1700	2600	0.000	0.0923	0.1061	0.0011	0.0009
32-049	32-049-WR-1	290	2190	0.000	0.0029	0.0061	0.0006	0.0003
32-057	32-057-WR-1	3800	10330	0.000	0.0300	0.0454	0.0015	0.0010
34-004	34-004-WR-1	8000	8100	0.000	0.2501	0.5350	0.0018	0.0008
34-004	34-004-TP-1	111000	25000	0.000	1.5917	11.6494	0.0116	0.0016
34-004	34-004-TP-2	259000	0	0.000	3.1261	20.7769	0.0000	0.0000
34-006	34-006-WR-2	7	100	0.000	0.0004	0.0010	0.0003	0.0001
34-006	34-006-WR-1	17000	54000	0.000	1.2466	1.8134	0.0181	0.0125
34-006	34-006-TP-1	782	15000	0.000	0.0299	0.0704	0.0235	0.0100
34-006	34-006-GW-1	0	0	0.150	5.7000	10.8000	0.0000	0.0000
34-006	34-006-GW-2	0	0	0.002	0.1000	0.1000	0.0000	0.0000
34-007	34-007-WR-1	4000	9000	0.000	0.2195	0.3299	0.0011	0.0007
34-007	34-007-WR-2	4000	9000	0.000	0.1510	0.1999	0.0007	0.0005
34-007	34-007-GW-1	0	0	0.095	1.8000	1.8000	0.0000	0.0000
34-009	34-009-WR-1	800	15300	0.000	0.0261	0.0505	0.0168	0.0087
34-009	34-009-WR-2	820	4590	0.000	0.0837	0.1107	0.0037	0.0028
34-009	34-009-WR-3	1600	6228	0.000	0.0016	0.0089	0.0001	0.0000
34-009	34-009-GW-1	0	0	0.009	1.8000	2.0000	0.0000	0.0000
34-010	34-010-WR-3	87500	76230	0.000	2.4300	4.9450	0.0165	0.0081
34-010	34-010-WR-1	1500	5850	0.000	0.0250	0.1638	0.0016	0.0002
34-010	34-010-WR-2	262500	228690	0.000	2.3246	12.8732	0.1287	0.0232
34-018	34-018-WR-1	5300	42900	0.000	0.0003	0.0080	0.0003	0.0000
34-018	34-018-WR-2	330	1035	0.000	0.0003	0.0065	0.0002	0.0000
34-018	34-018-GW-1	0	0	0.223	7.3000	9.0000	0.0000	0.0000
34-079	34-079-WR-1	1100	2835	0.000	14.5120	16.0112	0.1601	0.1451
34-079	34-079-SW-3	0	0	0.004	0.1000	0.2000	0.0000	0.0000
34-085	34-085-WR-1	6200	42120	0.000	0.2967	0.5064	0.0169	0.0099
34-085	34-085-WR-2	400	2790	0.000	0.9934	1.0990	0.0366	0.0331
34-090	34-090-WR-2	1800	877	0.000	0.1285	0.1458	0.0001	0.0001
34-090	34-090-WR-1	3100	7830	0.000	2.8953	3.2729	0.0109	0.0097
34-090	34-090-GW-1	0	0	0.000	0.0000	0.0000	0.0000	0.0000
34-090	34-090-GW-2	0	0	0.000	0.0000	0.0000	0.0000	0.0000
34-090	34-090-SW-3	0	0	0.002	0.1000	0.1000	0.0000	0.0000
34-093	34-093-WR-1	2400	5040	0.000	0.0609	0.1213	0.0012	0.0006
39-003	39-003-TP-1	3000	32760	0.000	54.3049	55.4859	1.8495	1.8102
39-003	39-003-TP-2	3000	0	0.000	247.8278	253.7426	0.0000	0.0000
39-003	39-003-WR-1	14000	162450	0.000	44.8166	46.7786	4.6779	4.4817
39-003	39-003-WR-2	2000	46300	0.000	25.7135	26.9561	2.6956	2.5713

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39-003	39-003-WR-3	2865	48785	0.000	7.1147	7.5251	0.7525	0.7115
39-003	39-003-GW-1	0	0	0.033	426.8000	430.5000	0.0000	0.0000
39-003	39-003-GW-2	0	0	0.022	2.3000	2.4000	0.0000	0.0000
39-003	39-003-GW-1AT	0	0	0.000	0.0000	0.0000	0.0000	0.0000
39-003	39-003-GW-1AD	0	0	0.000	0.0000	0.0000	0.0000	0.0000
39-004	39-004-WR-1	146525	247200	0.000	2266.9834	2366.3116	23.6631	22.6698
39-004	39-004-WR-2	11600	34092	0.000	120.5837	126.8304	1.2683	1.2058
39-004	39-004-WR-3	84000	207600	0.000	169.4676	175.7928	5.8598	5.6489
39-004	39-004-TP-1	21400	1350	0.000	79.9170	81.5484	0.0815	0.0799
39-006	39-006-WR-1	1500	16200	0.000	22.8250	23.8174	2.3817	2.2825
39-006	39-006-WR-2	1100	3600	0.000	31.3594	32.4142	0.3241	0.3136
39-006	39-006-GW-1	0	0	0.033	17.2000	18.4000	0.0000	0.0000
39-008	39-008-WR-1	4200	8550	0.000	2.2931	2.5269	0.0084	0.0076
39-008	39-008-GW-1	0	0	0.007	0.2000	0.2000	0.0000	0.0000
39-010	39-010-TP-5	480	3420	0.000	1.0500	1.1114	0.0370	0.0350
39-010	39-010-TP-1	595	0	0.000	0.9414	0.9858	0.0000	0.0000
39-010	39-010-TP-2	1425	32796	0.000	4.0093	4.1392	0.4139	0.4009
39-010	39-010-GW-1	0	0	0.056	51.3000	54.3000	0.0000	0.0000
39-010	39-010-GW-2	0	0	0.033	0.6000	0.7000	0.0000	0.0000
39-012	39-012-WR-1	5000	15400	0.000	0.7020	0.7190	0.0240	0.0234
39-012	39-012-GW-1	0	0	0.064	3.5000	3.6000	0.0000	0.0000
39-014	39-014-WR-1	300	3960	0.000	1.1299	1.1441	0.0381	0.0377
39-014	39-014-WR-2	350	7200	0.000	6.2854	6.7801	0.2260	0.2095
39-014	39-014-GW-1	0	0	0.002	0.1000	0.1000	0.0000	0.0000
39-018	39-018-WR-1	6500	47295	0.000	9.4588	9.7378	0.3246	0.3153
39-020	39-020-WR-1	5500	16200	0.000	19.6414	20.7870	0.6929	0.6547
39-020	39-020-WR-2	734	3900	0.000	8.5162	9.2674	0.3089	0.2839
39-020	39-020-WR-3	1466	7800	0.000	6.4086	6.6076	0.0661	0.0641
39-020	39-020-GW-1	0	0	0.007	6.4000	6.6000	0.0000	0.0000
39-022	39-022-WR-2	3000	10800	0.000	34.1609	37.6549	1.2552	1.1387
39-022	39-022-WR-1	7720	29970	0.000	7.1370	7.7456	0.2582	0.2379
39-023	39-023-WR-2	500	2700	0.000	0.1317	0.1348	0.0045	0.0044
39-023	39-023-WR-1	760	6700	0.000	0.1450	0.1583	0.0053	0.0048
39-024	39-024-WR-1	2700	13050	0.000	0.2530	0.2841	0.0284	0.0253
39-044	39-044-WR-1	1150	4500	0.000	5.4619	5.6755	0.0568	0.0546
39-044	39-044-WR-2	1080	3825	0.000	16.2633	16.9035	0.1690	0.1626
39-044	39-044-SW-1	0	0	0.010	0.3000	0.3000	0.0000	0.0000
39-052	39-052-WRAV/GX	90	238	0.000	0.0000	0.0007	0.0000	0.0000
39-062	39-062-WR-1	6500	17190	0.000	3.7401	3.9488	0.1316	0.1247
39-062	39-062-GW-1	0	0	0.011	0.6000	0.6000	0.0000	0.0000
39-077	39-077-WR-1	1600	26000	0.000	1.3243	1.4033	0.1403	0.1324
39-077	39-077-WR-2	400	8700	0.000	0.1685	0.1854	0.0062	0.0056
41-003	41-003-WR-1	18110	34200	0.000	11.8849	12.5715	0.1257	0.1188
41-003	41-003-WR-2	64000	109800	0.000	1.7852	2.4591	0.0820	0.0595
41-003	41-003-TP-1	17000	177700	0.000	77.0445	82.4857	8.2486	7.7045
41-003	41-003-TP-2	24000	130800	0.000	48.5993	52.6290	5.2629	4.8599
41-004	41-004-WR-1	3000	4950	0.000	0.7799	0.8850	0.0029	0.0026
41-004	41-004-GW-1	0	0	0.002	0.1000	0.1000	0.0000	0.0000
41-009	41-009-WR-1	2140	23510	0.000	0.0501	0.0572	0.0057	0.0050
41-027	41-027-WR-1	362	1710	0.000	0.0222	0.0229	0.0008	0.0007
45-002	45-002-WR-1	3800	18540	0.000	13.9738	15.3889	0.5130	0.4658
45-002	45-002-GW-1	0	0	0.007	0.2000	0.2000	0.0000	0.0000
45-005	45-005-WR-1	200	1584	0.000	5.7386	6.3087	0.6309	0.5739
45-005	45-005-WR-2	6000	22275	0.000	57.7776	63.4978	2.1166	1.9259
45-005	45-005-GW-1	0	0	0.056	5.7000	6.1000	0.0000	0.0000
45-009	45-009-WR-1	10490	29250	0.000	3.4057	3.7458	0.0375	0.0341

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45-009	45-009-GW-1	0	0	0.001	0.0173	0.0176	0.0000	0.0000
45-009	45-009-GW-2	0	0	0.004	0.1000	0.1000	0.0000	0.0000
45-010	45-010-WR-2	650	3240	0.000	8.2513	9.0852	0.3028	0.2750
45-010	45-010-WR-1	5650	23240	0.000	12.8108	14.1609	0.4720	0.4270
45-010	45-010-GW-1	0	0	0.005	0.2000	0.2000	0.0000	0.0000
45-041	45-041-WR-1	250	1000	0.000	0.0199	0.0221	0.0022	0.0020
45-041	45-041-GW-1	0	0	0.002	0.1000	0.1000	0.0000	0.0000
45-047	45-047-WR-1	290	2736	0.000	0.2586	0.2856	0.0286	0.0259
47-027	47-027-WR-1	10025	49860	0.000	10.9212	11.2012	0.1120	0.1092
47-028	47-028-WR-1	40000	68850	0.000	2.9985	6.5687	0.0219	0.0100
47-028	47-028-GW-1	0	0	0.033	0.6000	0.6000	0.0000	0.0000
47-029	47-029-WR-1	4100	3900	0.000	1.6227	1.7746	0.0059	0.0054
47-029	47-029-WR-2	2155	19700	0.000	1.3408	1.6409	0.1641	0.1341
47-029	47-029-GW-1	0	0	0.044	0.7000	1.0000	0.0000	0.0000
47-035	47-035-WR-1	65000	118800	0.000	24.2365	26.3055	0.8768	0.8079
47-035	47-035-WR-2	1620	11475	0.000	1.8644	2.0304	0.2030	0.1864
47-035	47-035-SW-3	0	0	0.056	5.4000	6.6000	0.0000	0.0000
47-037	47-037-WR-1	2000	17000	0.000	0.0007	0.0012	0.0001	0.0001
47-037	47-037-GW-1	0	0	0.044	0.6000	0.6000	0.0000	0.0000
47-081	47-081-TP-1	16000	18000	0.000	2.6954	3.3520	0.0335	0.0270
47-081	47-081-TP-2	20500	19350	0.000	4.0779	5.2537	0.0525	0.0408
48-001	48-001-WR-1	19666	74996	0.000	3.9305	4.0695	0.0407	0.0393
48-001	48-001-WR-2	39334	149991	0.000	6.6489	6.8050	0.2268	0.2216
48-001	48-001-WR-3	31400	163080	0.000	0.0549	0.0627	0.0021	0.0018
48-001	48-001-SW-1	0	0	0.078	2.1000	2.1000	0.0000	0.0000
48-005	48-005-TP-3	0	0	0.000	0.0000	0.0000	0.0000	0.0000
48-005	48-005-TP-1	550	2925	0.000	0.5519	0.5618	0.0187	0.0184
48-005	48-005-TP-2	5400	5625	0.000	5.0303	5.1258	0.0171	0.0168
49-001	49-001-WR-1	195	5620	0.000	0.0635	0.0675	0.0067	0.0064
49-002	49-002-TP-1	850	13770	0.000	0.2359	0.2568	0.0856	0.0786
49-002	49-002-TP-2	850	0	0.000	0.0674	0.0827	0.0000	0.0000
49-002	49-002-WR-1	2700	13320	0.000	2.5292	2.8082	0.2808	0.2529
49-002	49-002-WR-2	7450	21510	0.000	1.1700	1.3883	0.0463	0.0390
49-002	49-002-GW-1	0	0	0.033	0.6000	0.6000	0.0000	0.0000

